# **EXHIBIT A**

# IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF NEW YORK

RUSSELL DOVER, JONATHAN STONE,	)
CODY RANK, AND SUZZETTE PERRY, on	) Case No. 1:12-cv-05567-MKB-
behalf of themselves and all others similarly	) MDG
situated,	)
	) Hon. Raymond J. Dearie
Plaintiffs,	)
V.	)
	)
BRITISH AIRWAYS, PLC (UK)	)
	)
Defendant.	)
	)

Expert Report of Jonathan I. Arnold, Ph.D.

May 4, 2015

### **Table of Contents**

I.	INT	RODU	JCTION	1
	A.	QUA	ALIFICATIONS	1
	В.	BAC	KGROUND ON LITIGATION	2
	C.	ASS	IGNMENT	4
	D.	SUN	MMARY OF CONCLUSIONS	5
II.	SON	1E EC	ONOMICS OF FUEL SURCHARGES	11
III.		-	CHARGES LEVIED BY BRITISH AIRWAYS ARE NOT, FROM AN ECONOMICS TIVE, FUEL SURCHARGES	16
	A.	CON	TIMONY AND DOCUMENTS DEMONSTRATE THAT BRITISH AIRWAYS ISIDERED MANY FACTORS OTHER THAN CHANGES IN FUEL PRICES OR COSTS ETTING THE YQ CHARGES	19
		1.	BRITISH AIRWAYS USED METRICS OTHER THAN FUEL COSTS IN SETTING ITS YQ CHARGES	19
		2.	BRITISH AIRWAYS' FOCUS ON OVERALL PRICE TO CUSTOMERS INDICATES THAT THE YQ CHARGE WAS A COMPONENT OF PRICE, NOT A WAY TO ADDRESS FLUCTUATING FUEL COSTS	20
		3.	BRITISH AIRWAYS USED ITS YQ CHARGES AS A WAY TO INCREASE PRICING FLEXIBILITY	26
	В.		TISH AIRWAYS' YQ CHARGES DO NOT BEAR A CLOSE RELATIONSHIP TO THE REMENTAL FUEL PRICES OR FUEL COSTS FACED BY BRITISH AIRWAYS	31
	C.	THE	COST OF FUEL IN 2003 IS NOT RELEVANT	43
IV.	THE	ALLE	IN YQ CHARGES DURING	<b></b> 46
V.			ABILITY AND DAMAGES CAN BE DETERMINED FORMULAICALLY ON A CLASS-	52
	A.	ECO	NOMIC ISSUES THAT BEAR ON CLASS CERTIFICATION	52
	В.		MAGES FOR INDIVIDUAL MEMBERS OF THE PROPOSED CLASS CAN BE CULATED EASILY IN A FORMULAIC FASHION	54
VI.				<b></b> 55
	A.	AIR	AUSE OF BRITISH AIRWAYS' ABILITY TO RAPIDLY CHANGE FARES, BRITISH WAYS COULD RESPOND TO GENERALLY INCREASING FUEL PRICES WITHOUT L SURCHARGES	56
	В.		TISH AIRWAYS COULD HAVE DESIGNED A FUEL SURCHARGE PROGRAM UALLY RELATED TO ITS COST OF FUEL	59

	1.	ALTERNATIVE 1: A FUEL SURCHARGE BASED ON QUARTERLY CHANGES IN FUEL COSTS	61
	2.	ALTERNATIVE 2: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL COSTS PRIOR TO BA'S IMPOSITION OF THE £2.50 YQ CHARGE IN MAY 2004	63
	3.	ALTERNATIVE 3: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL PRICES PRIOR TO BA'S IMPOSITION OF THE £2.50 YQ CHARGE IN MAY 2004	64
	4.	ALTERNATIVE 4: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL COSTS WHEN BA COLLUSIVELY INCREASED ITS YQ CHARGE FROM £2.50 IN MAY 2004 TO £6.00 IN AUGUST 2004	64
	5.	ALTERNATIVE 5: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL PRICES WHEN BA COLLUSIVELY INCREASED ITS YQ CHARGE FROM £2.50 IN MAY 2004 TO £6.00 IN AUGUST 2004	65
C.	DAI	MAGES BASED ON ALTERNATIVE SCENARIOS	66

#### I. INTRODUCTION

#### **A. QUALIFICATIONS**

- 1. My name is Jonathan I. Arnold. I am employed by Chicago Economics Corp., and I am a Senior Advisor to Compass Lexecon. I specialize in the application of economics to legal and regulatory disputes. Prior to my current position, I served as Chief Economist at the New York State Office of the Attorney General (the "OAG"). In this role, I served as senior policymaker on economics questions for the Attorney General—covering Economic Justice, Criminal Justice, and Social Justice—as well as (i) overseeing economic analyses of key matters, (ii) retaining and supervising outside expert witnesses, and (iii) integrating economic analysis with legal analysis at the OAG. I have taught economics at a number of schools, including The University of Chicago (in both the Booth School of Business and the Department of Economics).
- 2. I earned my Ph.D. and M.B.A. from The University of Chicago's Booth School of Business and my B.A. from The University of Chicago. In addition, I am a certified public accountant. I have offered expert testimony in the form of live testimony in court and arbitration proceedings, depositions, expert reports, and affidavits on a variety of economics, intellectual property, finance, and accounting topics. In my work, I regularly analyze questions relating to the calculation of

damages, as well as serving as an economics expert on questions of class certification. My qualifications are summarized in greater detail in my curriculum vitae, which is attached to this report as Appendix 1 and contains information relating to my previous employment, affiliations, testimony, and publications.

3. Staff at Compass Lexecon supported me in my analysis. My hourly rate is \$875. I also receive compensation from Compass Lexecon based upon its billings in this matter and other factors. Neither my compensation nor that of Compass Lexecon depends upon the opinions that I offer or the outcome of this matter.

#### **B. BACKGROUND ON LITIGATION**

4. Plaintiffs in this matter are members of the British Airways ("BA") frequent flyer program, called the "Executive Club," who allege that BA breached its contract with them.<sup>1</sup> More specifically, Plaintiffs allege that:

if the Contract could be interpreted to allow BA to impose a fuel surcharge ... such a surcharge would only be appropriate if it – in BA's own words – "reflect[ed] the fluctuating price of worldwide oil." The hundreds of dollars of arbitrary (and previously undisclosed) BA profit surcharges imposed on

breached its Contract with each of [the named plaintiffs], and with hundreds of thousands of similarly situated Executive Club Members, when it charged exorbitant, arbitrary 'fuel surcharges' to Members who redeemed Miles for Reward Tickets.

Dkt. No. 131 Amended Complaint, ¶11 (hereafter "Complaint").

<sup>1.</sup> Specifically, that BA

Members who purchase Reward Tickets do not 'reflect the fluctuating price of worldwide oil.' In essence, they are nothing other than additional fare dollars.<sup>2</sup>

5. Counsel informs me that Plaintiffs intend to allege a class consisting of:

All members of the British Airways Executive Club who redeemed frequent flier miles for an award ticket from November 9, 2006 through April 17, 2013 and who paid a BA imposed "fuel surcharge", so long as that member provided British Airways with a valid United States address at the time of booking (excluding those members who redeemed frequent flier miles using what British Airways termed its 'Cash + Avios' option).

I have used this definition as the basis for my analysis of the issues relating to class certification, liability, and damages, although my analysis likely applies equally to any particular subset of this proposed class.

6. BA has testified in this litigation that "[i]t would not be appropriate to use the fuel surcharge for [a purpose] other than to recover or attempt to recover a portion of our increased costs." In denying BA's motion to dismiss, the Court made several comments consistent with the foregoing.<sup>4</sup>

(continued)

<sup>2.</sup> Complaint, ¶9

<sup>3.</sup> Foran 30(b)(6) Dep., p.44. I understand that Mr. Foran testified on behalf of BA as a 30(b)(6) witness. Hence, I often refer to Mr. Foran's deposition testimony as "BA's testimony."

Separately, I note that both BA's cost of fuel and the worldwide price of oil (and derivatives, such as jet fuel) are claimed to be the determinant of BA's purported fuel

#### C. ASSIGNMENT

7. I have been asked by counsel for Plaintiffs to analyze whether, from an economics perspective, BA's "YQ Charges" are fuel surcharges. Assuming that I determine that the YQ Charges were not fuel surcharges, I have been further asked to (1) analyze whether the YQ Charges resulted in economic harm to all members of the proposed class, or whether the question of economic harm

#### (continued)

surcharge (depending on the identity of the person giving testimony and/or the particular document one might be examining). In this report, I frequently refer to both cost and price when addressing this issue. From time to time, for brevity and expediency, I refer to just price or just cost. Notwithstanding the fact that I may not always refer to both cost and price each time I refer to one or the other, my conclusions do not change based on distinguishing between these two concepts.

- 4. Specifically, the Court said that the
  - ... complaint alleges, in essence, that the so-called fuel surcharges imposed by British Airways are not the fuel surcharges permitted by the Terms and Conditions. As the plaintiffs put it, "the 'fuel surcharge' is not a charge based on the price of fuel ... The plain meaning of the term 'fuel surcharge' is a supplemental charge that is reasonably related to or based upon the cost or price of fuel ... the typical consumer would consider a fuel surcharge to be an added charge imposed by an airline in order to defray rising fuel costs."

Order Denying Motion to Dismiss, pp. 8-9.

5. What BA termed "fuel surcharges" were recorded using a billing code known as "YQ." See Foran 30(b)(6) Dep., pp. 15-16. BA documents often refer to the revenue collected through its "fuel surcharges" as "YQ revenue" or "YQ charges." Throughout the remainder of my report I use the term "YQ Charges" to mean the revenue that BA generated through its purported "fuel surcharges." I understand that the YQ code also included £2.50 security and insurance charges from time to time. I am expressly excluding that charge from my discussion, and I have removed any such revenue from my damages tabulations in this report. Accordingly, all references to "YQ Charges" in this report exclude security and insurance charges.

requires individualized inquiries; (2) determine whether damages to members of the proposed class can be determined in a formulaic, class-wide fashion; and (3) estimate the aggregate damages to the proposed class.

8. In the course of my evaluation of Plaintiffs' claims, I apply standard economic principles and methods. My staff and I have reviewed a variety of materials relevant to this case, including: (1) court filings made by the Plaintiffs and BA, (2) deposition testimony of BA executives (including executives testifying on behalf of BA itself) related to the manner in which BA set its YQ Charges, (3) documents produced by BA in discovery, (4) data produced by BA on the amount of YQ Charges collected from members of the proposed class, (5) publically available information on fuel prices, and (6) relevant economics literature. A list of the materials upon which I have relied in reaching my conclusions is attached to this report as Appendix 2. I will continue to review any new materials that become available to me and may update or supplement my conclusions as needed to reflect the information contained in those materials.

#### **D. SUMMARY OF CONCLUSIONS**

9. Based on my analysis to date, as well as my skills, knowledge, experience, education, and training, I have formed the following opinions:

- As a matter of economics, the YQ Charges cannot be considered fuel surcharges. In order to be considered fuel surcharges, the YQ Charges must reflect changes in either the price of fuel (BA's documents suggest that this could mean either the price of crude oil or the price of a refined product) or BA's cost of fuel. The YQ Charges do not reflect either one. Rather, my analysis of YQ Charges leads me to conclude that they were simply an element of the total price that BA charged its customers.
- Notwithstanding BA's assertion that the fuel surcharges "reflect[ed] the fluctuating price of worldwide oil," testimony by BA executives indicates that BA considered many factors other than changes in the price of oil or cost of fuel in setting and changing its YQ Charges. 6

  Consistent with this testimony, the data indicate that the YQ Charges were not closely related to changes in fuel prices. For example, as shown in Figure C-1, BA's YQ Charges increased more rapidly than the increase in fuel prices relative to the first quarter of 2004. YQ

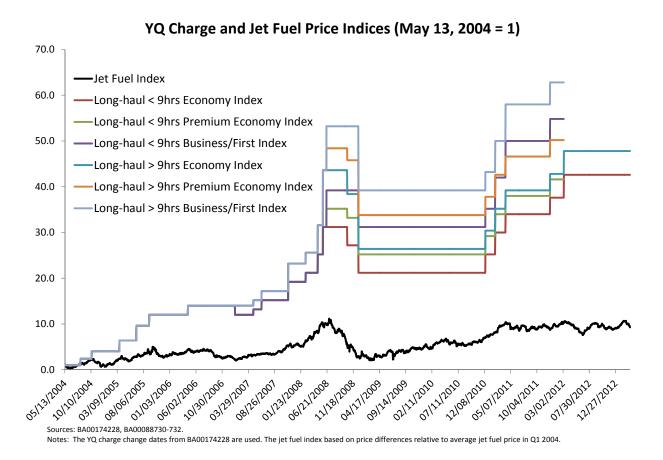
<sup>6.</sup> Quoted from BA's website from July 2009 until March 25, 2013. BA's Response to Plaintiffs' Second Set of Requests for Admission, No. 4; see also Complaint ¶¶ 7, 9, 45.

Charges fell less rapidly than the decrease in incremental fuel prices.

In addition, the data indicate that

- BA's YQ Charges often did not increase (or decrease) when fuel prices increased (or decreased).
- The ratio of YQ Charges to base fares varied widely over time and within individual fare groups (i.e., short-haul, long-haul, etc.), and the YQ Charge was often larger than the base fare with which it was associated.
- YQ Charges often varied based on the point of purchase. For
  example, the YQ Charges for travel from New York to London
  and back were higher than the YQ Charges for travel from
  London to New York and back, even though the distance flown
  on the routes was identical.

Figure C-1



- Because the YQ Charges cannot be considered fuel surcharges, each member of the Class has been injured in the amount that he or she paid in conjunction with his or her reward ticket or tickets.
- I understand from Counsel that damages in this case may be
  determined by considering a "but-for" world in which BA had not
  breached its contract with proposed Class members, but had instead
  taken some other commercially reasonable action. As a matter of

economics, BA had a range of commercially reasonable alternatives that would not have breached the contract:

- BA could have (1) adjusted its fares to reflect changes in fuel costs, (2) designed a fuel surcharge that reflected changes from prior fuel costs, or (3) designed a fuel surcharge that reflected changes from prior fuel prices.
- Depending on the scenario ultimately accepted by the trier of fact, damages to the proposed class range from , exclusive of any prejudgment interest the Court may award.<sup>7</sup>
- Damages in this case are easily determined on a class-wide basis and
  do not require individualized analysis common evidence and
  analysis can demonstrate that all (or nearly all) members of the Class
  suffered damages and that damages can be determined formulaically

<sup>7.</sup> I understand that BA has not provided Plaintiffs any information related to the identity of proposed Class members and will not provide that information unless a class is actually certified. Instead, BA produced an anonymized database of all individuals who had a US address. I base my calculations on the anonymized database. My approach to analyzing class certification, liability, and the attendant damages will not change assuming, for the sake of argument, that Defendants or their experts successfully propose alternative means of identifying members of the proposed class. If a narrower (or broader) universe of individuals are members of the class, it is a straightforward mathematical exercise to update my calculations to reflect such a finding.

- on a Class-wide basis. Moreover, damages can readily be apportioned among individual members of the Class.
- 10. The remainder of my report is organized as follows:
  - **Section II** discusses the economics of fuel surcharges.
  - Section III demonstrates that the YQ Charges are not, from an
    economic perspective, fuel surcharges, because they were not set on
    the basis of changes in fuel prices, they are not closely related to
    changes in BA's fuel costs, and they were influenced by other factors.
  - <u>Section IV</u> presents certain facts relating to Plaintiffs' redemption of awards travel, including a calculation of the total amount of YQ
     Charges they paid in the course of these redemptions.
  - all or nearly all potential Class members suffered injury and that damages can be calculated formulaically on a class-wide basis. Since BA's YQ Charges were not, from an economic perspective, actually fuel surcharges, and thus were not permitted under the contract, BA's liability to all Class members relating to YQ Charges can be analyzed (using a quantitative model and basic economic principles)

using a common approach. I am able to compute damages using a systematic, formulaic approach as well.

#### II. SOME ECONOMICS OF FUEL SURCHARGES

At issue in this case is BA's imposition of YQ Charges, which it claims 11. "reflect the fluctuating price of worldwide oil." Fuel costs are an important component of variable cost in many industries. For any given level of output and associated fuel use, rising fuel prices push firms' variable costs upward. This, in turn, causes upward pressure on the current market price of a good or service, as suppliers seek to increase prices to cover the increased costs. Conversely, falling fuel prices cause downward pressure on market prices as lower variable costs induce suppliers to lower price in the hopes of expanding sales. When final goods are bought and sold on a "spot" basis and buyers and sellers have no commitments to each other beyond the immediate transaction, prices typically fluctuate constantly. In that case, changes in demand and supply conditions (here, changes in the price of oil) can be incorporated quickly into the market price.

<sup>8.</sup> Quoted from BA's website from July 2009 until March 25, 2013. BA's Response to Plaintiffs' Second Set of Requests for Admission, No. 4; see also Complaint ¶¶ 7, 9, 45.

- In contrast, in industries characterized by buyers and sellers who 12. frequently transact over long time periods, market participants may wish to eliminate risks associated with fluctuating spot prices (and volumes). Under such circumstances, buyers and sellers can improve the economic efficiency of their relationship by making mutual commitments in long-term contracts. However, contracts with fixed prices (or other circumstances, such as price regulation, in which prices are difficult to adjust) do not allow prices to adjust quickly – for example, price changes that reflect changing market conditions such as fluctuations in fuel costs. When long-term prices are difficult to adjust, fuel surcharges can provide an efficient way to provide a transparent, formulaic means of adjusting prices as costs change. In these circumstances, fuel surcharges can reduce transactions costs and enhance efficiency by determining the way in which the risks of fuel price changes will be shared.
- 13. I note that there is a fundamental difference between a charge and a surcharge. In general economic terms, the charge will reflect the underlying cost of the fuel, and thus will be included in the base price; the surcharge will reflect the portion of cost that is transitory or unanticipated.
- 14. The factors identified above imply that fuel surcharges are most likely to be observed in fuel-intensive industries that are characterized by fixed

prices, either due to long-term contracts, such as rail freight services, or regulated prices, such as taxi cab services.

- From an economics perspective, firms set their prices to reflect the 15. supply, demand, and competitive conditions they face. Similarly, buyers make purchasing decisions based on the total price of the product they are buying. Whether price is a single number or the sum of several smaller numbers is irrelevant as a matter of economics. For example, whether a given element of price is labeled "fuel surcharge," "fare," or "carrier imposed charge" is also irrelevant for tickets purchased using cash. Imagine a scenario in which two airlines each price an economy ticket at \$500, but one airline reports only the overall price of \$500, while the other reports that the ticket price will be \$100 for labor, \$150 for fuel, \$50 for catering, \$50 for maintenance, \$100 of depreciation, and \$50 of profits, for a total of \$500. For both the airline and the consumer, these are equivalent. Now suppose the first airline increases prices by \$50, and the second airline matches. To both the consumer and the airline, it makes no difference whether the second airline assigns the increase in price to an increase in fuel costs, labor costs, profits, or some other category.
- 16. Testimony from other airlines is consistent with the economic theory.Ms. Sharon Mickelson, the Director of Revenue Management for Delta Airlines,

testified that beginning in 2008, Delta imposed YQ Charges on some of its routes, and subsequently in 2012 imposed surcharges that used a "YR" billing code. She testified that Delta "utilized surcharges much like we set prices. It's based on demand, supply in the market, [and] competitiveness...." This testimony confirms the basic economic point that neither airlines nor their customers care what one calls the individual components of price; it is the overall price that matters.

17. Although the YQ Charge is actually one component of the total price that customers pay, BA executives testified that BA considered this charge as a way to recover its fuel costs. For example, BA testified that a fuel surcharge should only relate to attempts to recover a portion of increased costs of fuel:

[i]t would not be appropriate to use the fuel surcharge for [a purpose] other than to recover or attempt to recover a portion of our increased costs.<sup>11</sup>

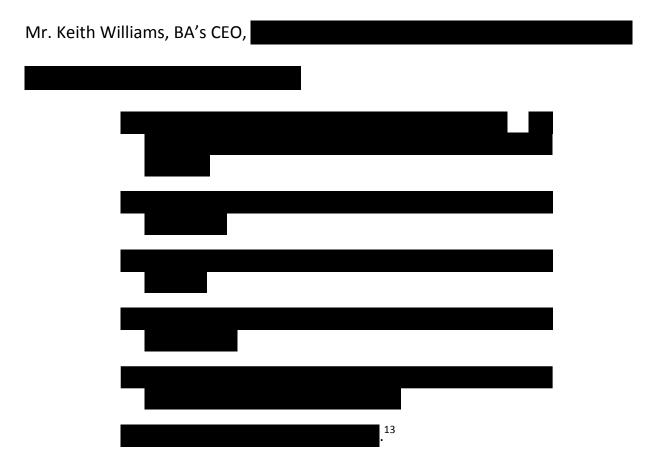
Mr. Andrew Crawley, the Chief Commercial Officer for BA, gave similar testimony, and acknowledged that if BA set a fuel surcharge using other parameters, then it would not actually be a fuel surcharge:

<sup>9.</sup> Mickelson Dep., pp. 23-24.

<sup>10.</sup> Mickelson Dep., p. 34. She further testified that Delta had a fuel surcharge of \$25 to \$50 dollars for two to three months in 2008, and after that time period did not impose a fuel surcharge. Mickelson Dep., pp. 37-38.

<sup>11.</sup> Foran 30(b)(6) Dep., p. 44.

- Q. And the fuel surcharge should be determined outside the market pricing mechanic?
- A. Which is what we did.
- Q. Because if it were determined within the market pricing mechanic then it wouldn't be a fuel surcharge, right?
- A. Correct ...<sup>12</sup>



Similarly Mr. Foran testified that "[e]very change we made to the fuel surcharge was based on our increasing or decreasing bill for fuel at that time." 14

<sup>12.</sup> Crawley Dep., p. 115.

<sup>13.</sup> Williams Dep., pp. 28-29.

<sup>14.</sup> Foran 30(b)(6) Dep., p. 17.

18. I evaluate these statements by BA and its executives using the tools of economics. As discussed in the next section, the data indicate that the YQ Charges were not fuel surcharges.

## III. THE YQ CHARGES LEVIED BY BRITISH AIRWAYS ARE NOT, FROM AN ECONOMICS PERSPECTIVE, FUEL SURCHARGES

19. In May 2004, BA introduced its first YQ Charge, £2.50 per sector on all of its flights. In talking points BA prepared in connection with this decision, BA stated that "[t]he charge is being introduced as a result of the continuing increase in oil prices." This document further stated that the YQ Charge was introduced instead of an increase in fares because "[a] charge allows greater flexibility in response to changing oil prices and provides greater transparency to our customers." Similarly, an August 2004 BA document explained that it chose to impose the YQ Charge instead of increasing fares because:



<sup>15.</sup> A "sector" is a leg of a ticket. For example, a round trip ticket for travel between New York's JFK Airport and London's Heathrow Airport has two sectors. In the United States, "sectors" are often referred to as "segments." However, I have noticed that BA personnel generally use the term "sector," a convention that I adopt for purposes of this report.

<sup>16.</sup> BA00123621.

<sup>17.</sup> BA00123621.

20. Figure 1 below presents the changes BA made to its global YQ Charges over time. <sup>19</sup> As can be seen from that figure, in addition to periodically increasing the level of the fuel surcharge, BA also changed the structure of the global YQ Charges, charging different rates for long-haul and short-haul flights beginning in August 2004; charging different rates for long-haul flights, depending upon whether the flight was over 9 hours or under 9 hours beginning in January 2007; and charging different YQ Charges for different classes of service beginning in June of 2008.

<sup>18.</sup> BA00123574.

<sup>19.</sup> For ease of reference, this and all other figures are also presented in Appendix 3.

Figure 1

#### **History of BA's YQ Charges**

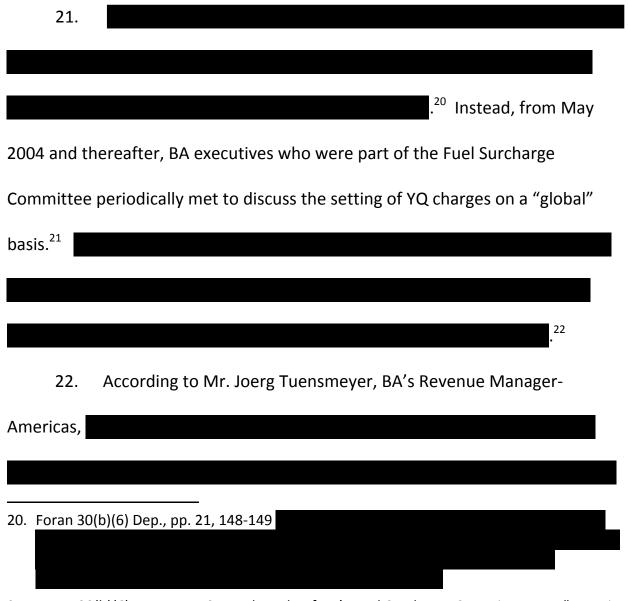
		YQ Charges (GBP/Sector)							
		Long-haul < 9hrs Long-haul > 9hrs			hrs	Short-haul			
			<b>Economy Business</b>		Economy		Business		
	Jet Fuel	Economy	(World	(Club	Economy	(World	(Club	Economy	Business
	Costs	(World	Traveler	World)	(World	Traveler	World)	(World	(Club
Date	(GBP/Ton)	Traveler)	Plus)	and First	Traveler)	Plus)	and First	Traveler)	Europe)
_									
_									
_									
_									
_									
_									
_									
_									
_									

Sources: BA00174228, BA00088730-732.

Notes: Highlighted cells denote events when differences across flight distance or booking class were introduced for the first time.

YQ change dates had small differences between BA00174228 and BA00088730 for some events. The dates from BA00174228 are reported.

- A. TESTIMONY AND DOCUMENTS DEMONSTRATE THAT BRITISH
  AIRWAYS CONSIDERED MANY FACTORS OTHER THAN CHANGES IN
  FUEL PRICES OR COSTS IN SETTING THE YQ CHARGES
  - 1. BRITISH AIRWAYS USED METRICS OTHER THAN FUEL COSTS IN SETTING ITS YQ CHARGES



- 21. Foran 30(b)(6) Dep., pp. 13-14. The role of BA's Fuel Surcharge Committee was "to review the BA fuel surcharge levels and propose change[s] to the levels and structure of the Fuel surcharge." BA00153304.
- 22. Foran 30(b)(6) Dep., pp. 71-75; BA00153304.



- 2. BRITISH AIRWAYS' FOCUS ON OVERALL PRICE TO CUSTOMERS INDICATES THAT THE YQ CHARGE WAS A COMPONENT OF PRICE, NOT A WAY TO ADDRESS FLUCTUATING FUEL COSTS
- 23. Both testimony and data indicate that BA viewed its YQ Charge as simply one part of overall ticket price and frequently adjusted either the base fare or, less frequently, the YQ Charge to account for competitive conditions. For example, BA testified that the

24. BA00156278

See Foran 30(b)(6) Dep. pp. 258-259.

<sup>23.</sup> Tuensmeyer Dep., p. 48.

BA's Ms. Jo Boswell testified similarly:



<sup>25.</sup> Foran 30(b)(6) Dep., p. 43.

<sup>26.</sup> Howick Dep., p. 73.

<sup>27.</sup> Foran 30(b)(6) Dep., p. 74.

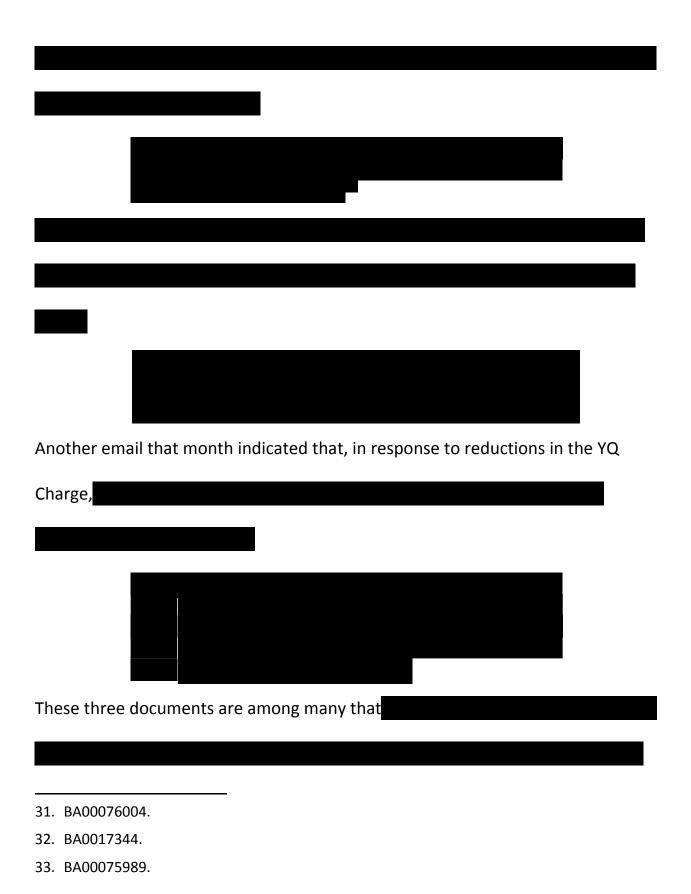
<sup>28.</sup> Boswell Dep., p. 70.

24. American Airlines collaborates with BA through a joint business arrangement, which includes discussions of pricing, including the YQ Charge, between the two airlines. William Heald, American's Director of Atlantic Revenue Management, testified that when American offered suggestions to BA regarding the level of the YQ Charge for their joint business, American only:

. 29	
25.	

<sup>29.</sup> Heald Dep., p.17.

<sup>30.</sup> BA00076004.



They do not support the claim that YQ Charges were adjusted solely or primarily to recover a portion of BA's incremental fuel cost in excess of some reference level.

26. BA's widespread use of "tactical" YQ Charges also indicates that BA viewed these charges not as fuel surcharges that changed with changes in the global price of fuel, but rather as elements of price to be adjusted based on competitive conditions. As Mr. Foran explained,



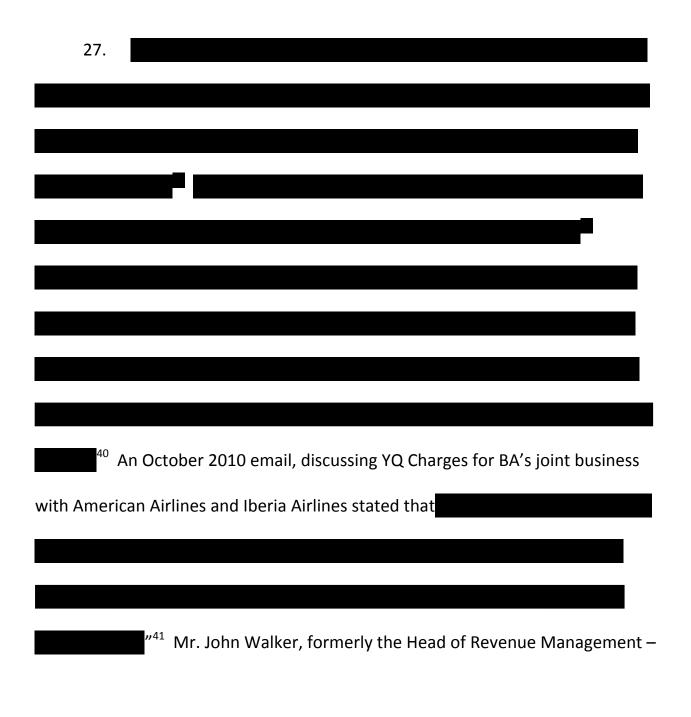
He testified further that:



<sup>34.</sup> I have reviewed the expert report of Robert Kokonis. Among other things, it includes a list of documents in which BA executives discussed the YQ Charge without any reference to the cost or price of fuel. *See Kokonis Appendix D*.

<sup>36.</sup> Foran 30(b)(6) Dep., p. 136.

<sup>37.</sup> Foran 30(b)(6) Dep., p. 138.

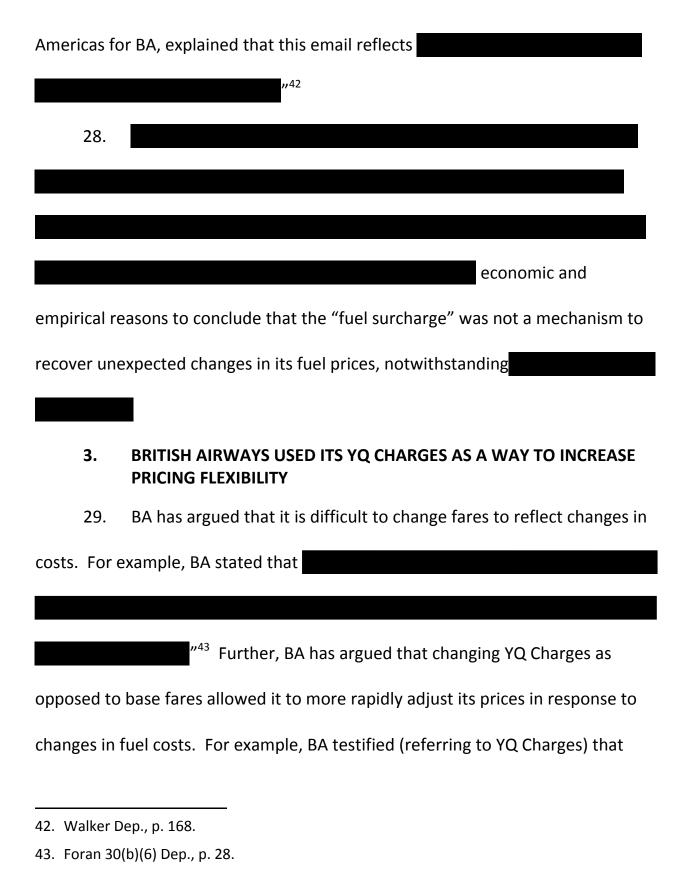


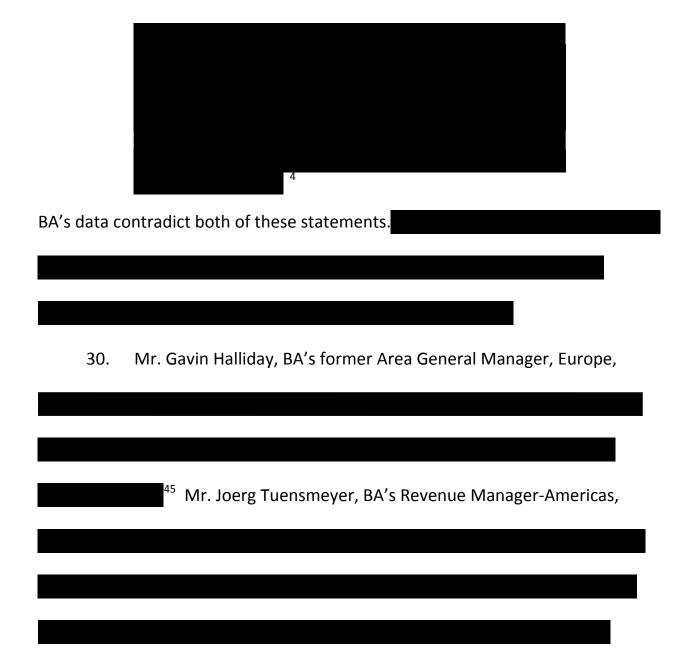
<sup>38.</sup> BA00085850.

<sup>39.</sup> BA00076034.

<sup>40.</sup> BA00076054-5.

<sup>41.</sup> BA00078962.





<sup>44.</sup> Foran 30(b)(6) Dep., p. 26.

<sup>45.</sup> Halliday Dep., p. 36.

Moreover, as discussed in the Expert Report of Robert Kokonis, BA did not need to use the YQ Charge to change its fares quickly on a global basis.<sup>47</sup>

31. Even if it were true that BA could only change its fares with difficulty, evidence indicates that BA actually changed its YQ Charges much less frequently than its base fares. Figure 2 below reports the number of days each of BA's YQ Charge levels was in effect, and shows that on average, BA only changed its YQ Charges every 154 days, or roughly once every five months. As Mr. Kokonis also explains, whether BA could rapidly change its fares or not, it had the ability to change its fares at least as frequently as it changed the YQ Charge.<sup>48</sup>

<sup>46.</sup> Tuensmeyer Dep., p. 70.

<sup>47.</sup> See Kokonis Report, §III.A. See also generally Mickelson Dep. (testifying that both Delta and Northwest Airlines did not generally impose fuel surcharges).

<sup>48.</sup> See Kokonis Report, §III.A.1.

Figure 2

### **Average Duration of BA YQ Charges**

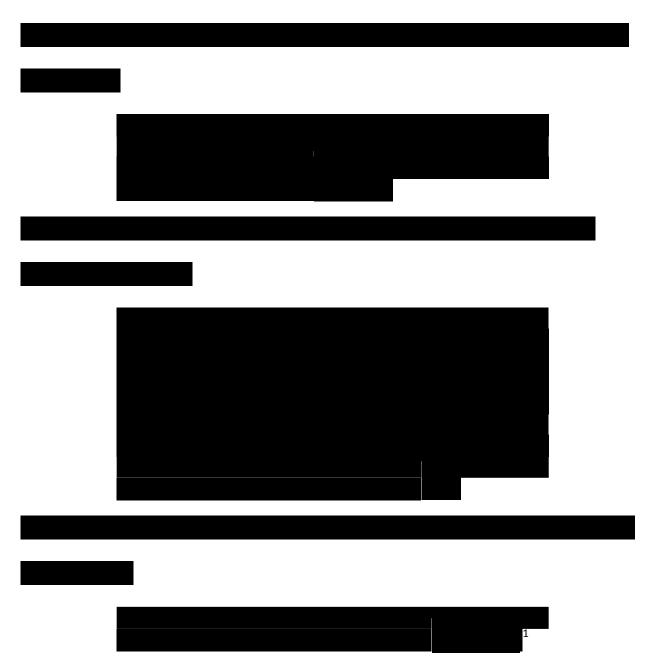
YQ Change	YQ Change Number	YQ in Effect (Days)			

Sources: BA00174228, BA00088730-732.

Notes: Based on May 13, 2004 - March 20, 2013.

Based on Economy Class Long-Haul Under 9 Hours.

32.



Further, BA stated that:

<sup>49.</sup> BA00133436.

<sup>50.</sup> BA00123693-4.

<sup>51.</sup> BA00123694, referring to commissions payable to travel agents.

- B. BRITISH AIRWAYS' YQ CHARGES DO NOT BEAR A CLOSE RELATIONSHIP TO THE INCREMENTAL FUEL PRICES OR FUEL COSTS FACED BY BRITISH AIRWAYS
- 33. As detailed above, BA had no formula to link changes in its fuel costs to changes in its YQ Charges—it changed these charges episodically and as a result of many considerations besides changes in the cost of fuel. Indeed, Mr. Ian Howick, a former Head of Treasury at BA, testified as follows:



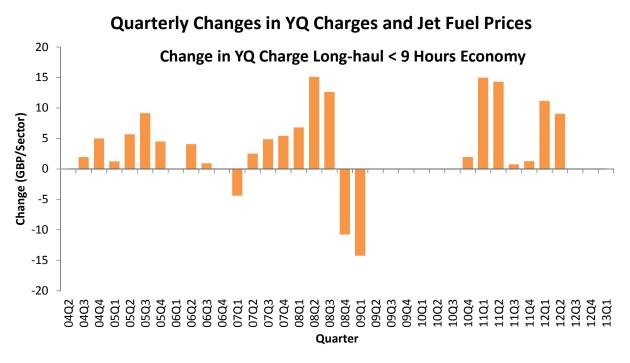
34. It is not surprising, therefore, that changes in BA's YQ Charges do not bear a close relationship to changes in either fuel prices or BA's fuel costs. Figure 3 below contains the quarterly changes in BA's YQ Charges for Economy Long-

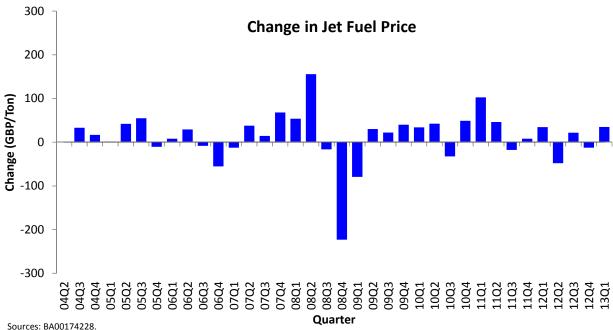
<sup>52.</sup> BA00123694.

<sup>53.</sup> Howick Dep., p. 32

Haul flights of less than nine hours (relative to YQ Charge in effect in the prior quarter) and the quarterly change in a measure of jet fuel prices tracked by BA. It is clear from this figure that there were many periods in which the quarterly changes in BA's YQ Charges did not change in reaction to quarterly changes in jet fuel prices. Thus, the quarterly changes in the YQ Charge are not closely related to changes in the jet fuel prices that BA itself tracks.

Figure 3



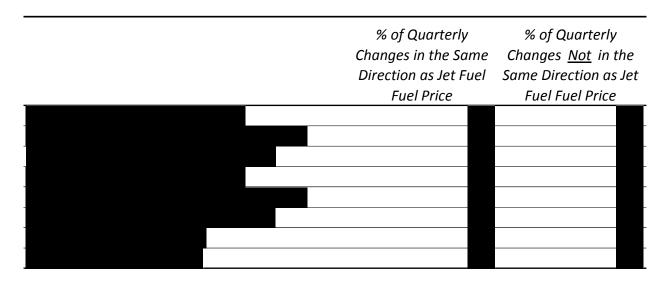


Notes: 04Q2 based on May 13 - June 30, 2004; 13Q1 based on January 1 - March 20, 2013.

35. More generally, I have compared the number of quarters in which a change in the YQ Charge increased (or decreased, or remained unchanged) when jet fuel prices have also increased (or decreased, or remained unchanged) for each of BA's different YQ Charges, for example for short haul tickets, first class tickets, and so forth, and changes in the jet fuel cost tracked by BA. The results of this analysis are shown in Figure 4 below. In particular, I examined changes in BA's YQ Charge, by category, from the time it was introduced in 2Q 2004 until 3Q 2013. BA changed the YQ Charge in the opposite direction of jet fuel price movements or left the YQ charge unchanged when the jet fuel price changed 39 to 65 percent of time.

Percentage of Quarters In Which YQ Charge Changed in the Same

**Direction as Jet Fuel Price** 



Sources: BA00174228, BA00088730-732.

Notes: Unchanged YQ Charge is counted separatly from positive and negative changes.

Long-haul economy YQ charges based on May 13, 2004 - March 20, 2013.

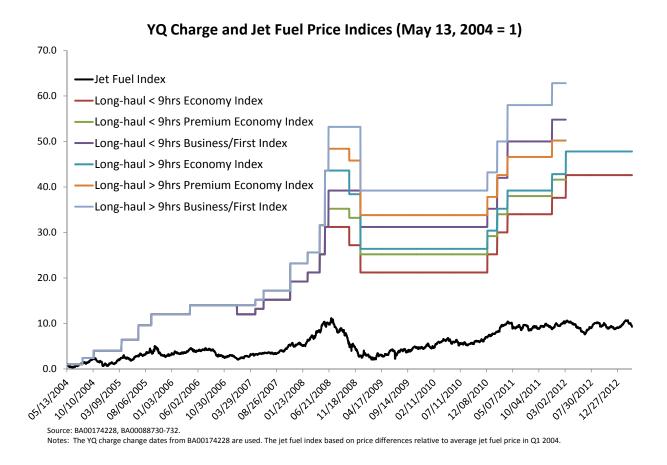
YQ charges other than long-haul economy based on May 13, 2004 - March 6, 2012.

36. The lack of a meaningful relationship between BA's YQ Charges and jet fuel prices can also be seen by comparing the growth in BA's YQ Charges to the growth in jet fuel prices. As shown in Figure 5 below, BA's YQ Charges grew much more rapidly than did fuel prices over the class period.<sup>54</sup> For example:

<sup>54.</sup> For this analysis, I measure the jet fuel prices as the difference between the jet fuel price on any given day and the average jet fuel price during 2004 Q1, the quarter prior to BA's imposition of the YQ Charge.

- Jet fuel prices, relative to the first quarter of 2004, increased from May 13, 2004 (when the YQ Charge was first imposed) to July 17, 2008 by 900 percent; during the same period,
- After the start of the financial crisis in September 2008, fuel prices collapsed, falling more than 70 percent from July 17, 2008 to December 30, 2008. However,
- By April 15, 2012, fuel prices returned to July 2008 levels (more precisely, fuel prices were less than one percent higher than they had been in July 2008). However, BA's

Figure 5



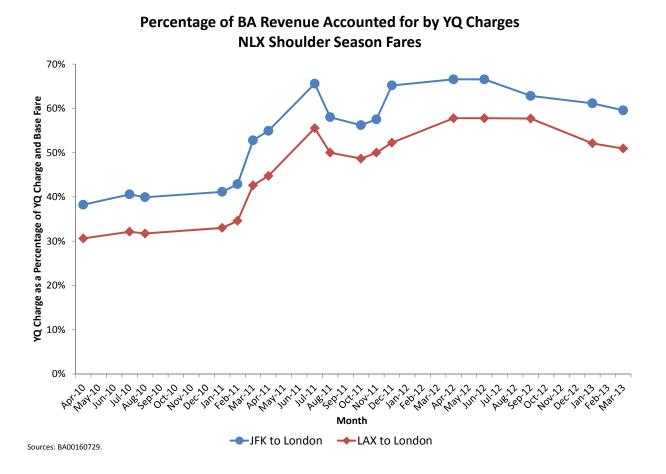
37. The magnitude of BA's YQ Charges also indicates that they were not fuel surcharges in an economic sense. In particular, BA's YQ Charges often exceeded the amount of the base fare it charged passengers. For example, I have examined the relationship between YQ Charges and base fares for travel between

the US and London between April 2010 and March 2013, the period during which BA itself tracked the relationship between these charges.<sup>55</sup>

38. As shown in Figure 6, in 12 of 17 months the YQ Charge was at least as large as the base fare for travel between New York's JFK Airport and London. Similarly, in 9 of 17 months, the YQ Charge was at least as large as the base fare for travel between Los Angeles International Airport and London. For listed fares, BA's average YQ Charge during this period accounted for 55 percent of the total price (excluding taxes) for travel from New York and 46 percent for travel from Los Angeles.

55. BA00160729.

Figure 6



39. This phenomenon of YQ Charges exceeding base fares is not limited to certain routes or time periods. I have compared coach fares as reported in data from ATPCO that have been produced in this litigation to the coach YQ

Charges paid by members of the proposed class. <sup>56</sup> I have performed this comparison for the lowest, second lowest, and third lowest fares in effect on each route for each time period, based on those fares that were in effect for at least 30 days. <sup>57</sup> The results of this analysis are reported in Figure 7, and indicate that, on average BA's YQ Charges were between 36 and 43 percent of the total fare (base fare and fuel surcharge) for the three lowest fares. For the 75<sup>th</sup> percentile of these comparisons, BA's YQ Charges were between 52 and 62 percent of the total fares. Put another way, for at least 25 percent of route and time period combinations, the YQ Charge exceeded the base fare for the three lowest available fares.

<sup>56.</sup> ATPCO is the Airline Tariff Publishing Company. ATPCO describes itself as

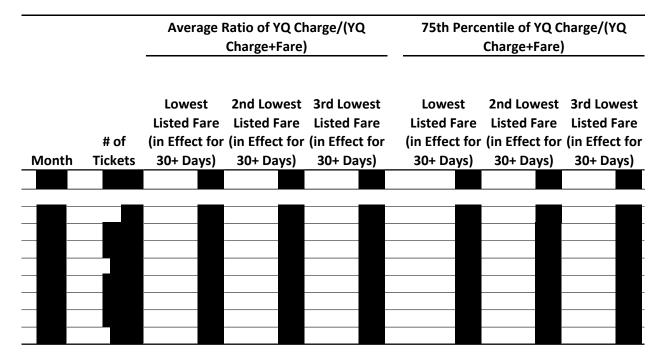
the world's leader in the collection and distribution of airline fare and fare-related data. We collect this information from more than 450 airlines worldwide and distribute it to global distribution systems (GDS) such as Amadeus, Travelport, and Sabre; online travel agents (Expedia and ITA); and other computer reservation systems (CRS).

See http://www.atpco.net/about-atpco.

<sup>57.</sup> I have converted fares and YQ charges expressed in GBP and EUR to USD using daily exchange rates posted by the Federal Reserve in its H-10 data release.

Figure 7

## Comparison of YQ Charges and Fares Reported by ATPCO Data by Year



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626); ATPCO data received on 12 02 2014; Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: Based on YQ surcharges with 'X (Economy)' booking class.

2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

Based on one-way and one-stop round-trip tickets.

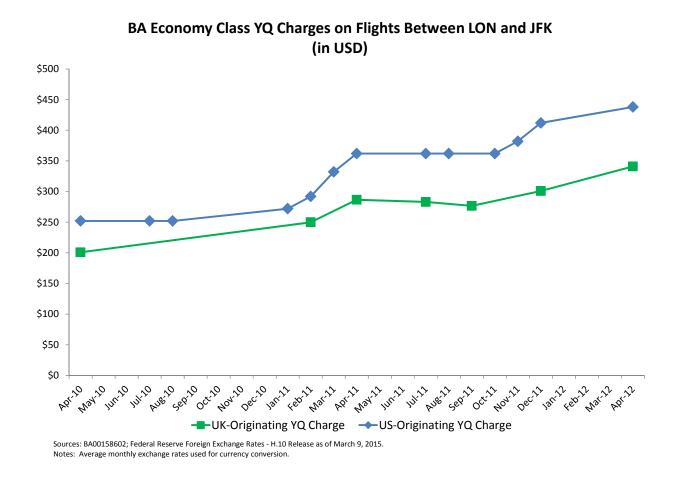
40. Perhaps more significant is the fact that different passengers flying the same routes paid different YQ Charges, depending upon where their trips originated. This is a clear indication that the YQ charges are not related to the cost of fuel.

	. A letter written by BA's former
CEO, Sir Ma	artin Broughton, stated:
41.	Data provided by BA support this statement. For example, a BA
document	reports fares and YQ Charges from April 2010 to April 2012 for travel
between, a	mong other points, New York and London. <sup>59</sup> As shown in Figure 8
below,	

<sup>58.</sup> BA00156278.

<sup>59.</sup> I have converted monthly fares and YQ charges expressed in British pounds ("GBP") to U.S. dollars ("USD") using average monthly exchange rates calculated using data posted by the Federal Reserve in H-10 data release.

Figure 8



42. All of these analyses indicate that BA's YQ Charges were not, in fact, reasonably related to changes in the price of fuel or BA's fuel costs.

#### C. THE COST OF FUEL IN 2003 IS NOT RELEVANT

43. Among other things, BA has claimed that the YQ Charge was intended to recover fuel costs to the extent they exceeded 2003 levels. For example, Mr. Andrew Crawley, BA's Chief Commercial Officer testified that the YQ Charge was intended to recover the incremental increase in fuel costs over its

2003 fiscal year. <sup>60</sup> Elsewhere in this report, I have described multiple instances and contradictory testimony that indicate that the YQ Charge was an element of price that was often adjusted with little or no reference to fuel prices or costs. Even in the absence of these examples and testimony, using 2003 as the reference point for computing a fuel surcharge year after year is both illogical as a matter of economics and contradicted by BA's own testimony.

- 44. Using 2003 as a reference point year after year is both arbitrary and inappropriate. BA's own executives have acknowledged the arbitrary nature of this reference period. BA's CEO, Mr. Keith Williams, when asked why the baseline for fuel prices was 2004, responded "Why not 1992? Why not 1962?" Under Mr. William's own logic, it would have been both reasonable and appropriate for BA to have selected any year, including 2003, as its reference for setting a YQ Charge one hundred years hence, regardless of whether fuel prices stabilize at current levels, rise further, or decline.
- 45. The use of 2003 as a reference year is inappropriate because the airline industry is not characterized by widespread use of long-term contracts, nor is it characterized by sticky pricing, that is, pricing that is difficult or

<sup>60.</sup> Crawley Dep., p. 19.

<sup>61.</sup> Williams Dep., p. 35.

cumbersome to adjust in response to changing market conditions. Thus, it is not reasonable to assess a fuel surcharge based on a benchmark that is several years old. To see why this is so, consider that most of the changes in fuel prices that had occurred (or were to occur) between 2003 and 2008 were already known in 2007. Thus, using 2003 prices as a benchmark instead of some more recent price will inappropriately ignore a great deal of information known to BA. Similar logic applies to 2006, 2007, 2009, and so forth.

46. In addition to the economic logic that supports using a recent reference point (as opposed to using the fixed reference point of 2003 oil prices), BA's own executives offered testimony that supports the use of recent dates as contemporaneous reference point. For example, Mr. Howick testified that

.62 I have seen nothing in the record that supports the proposition that BA's budgeted fuel prices and fuel costs in 2006, 2007, 2008, and beyond reflected 2003 oil prices, as opposed to expectations based on more recent pricing experience.

62. Howick Dep. p. 28.

### IV. CHARGES DURING THE ALLEGED CLASS PERIOD

47. During fact discovery, BA produced extracts of a database known as the "ICW data." These data contain information on the bookings the Executive Club members made using frequent flyer miles, as well as information on tickets and sectors associated with each booking. They also contain all of the YQ Charges paid by Executive Club members with addresses in the United States that

Cemlyn-Jones second Dep., April 9, 2015, pp. 228-229.

65. I understand that BA relied on self-reported address information to identify the Executive Club members with US addresses:

I'd like to just make sure for the record exactly what you think is in this [address] file. This file contains all the address records for any Executive Club member that made a booking during the class period that had a U.S. address that was active at the time of booking.

Cemlyn-Jones second Dep., April 9, 2015, p. 245.

(continued)

<sup>63.</sup> The ICW stands for "Integrated Commercial Warehouse" (See first deposition of BA's 30(b)(6) witness Charles Cemlyn-Jones, March 17, 2015, p. 29.) BA produced extracts from its ICW database 7 different times, each time to correct various errors. I understand that the extracts from ICW database produced on April 3, 2015, and later supplemented on April 15, 2015, constitute the correct version of the data, which parties agreed to rely on.

<sup>64.</sup> Specifically, the ICW data field REPORTED\_TAX\_VLU produced on April 3. 2015, contains the YQ charges collected by BA:

Q. Is it correct this field reported tax value field contains the exact amount of fuel surcharge collected by BA during the class period from U.S. resident?

A. No. It contains the YQ surcharge plus security surcharge plus insurance surcharge.

Q. Stated differently, is it correct this field contains correct [sic] amount of the YQ that is collected by BA during the class period from U.S. residents?

A. Yes.

redeemed frequent flyer miles to purchase tickets.<sup>66</sup> In addition to data on the YQ Charges paid by these proposed class members, which are reported in British pounds, the data provide information on the booking class of the ticket, the origin and destination of travel, the date the ticket was booked, and the date of travel.<sup>67</sup> I understand that, from November 2001 to January 2012, the YQ Charge included an airport security and insurance surcharge of £2.50 per sector, which Plaintiffs do not claim violates the contract. In the remaining discussion of these data, I have excluded this security and insurance surcharge. I have also converted the remaining YQ Charges into US dollars.<sup>68</sup>

#### (continued)

My review of the address data indicates that nearly all (99.9%) of bookings in the ICW extract are associated with Executive Club members who provided a US address at the time of booking.

- 66. I understand that the ICW data extract provided by BA exclude bookings made part with cash and part with frequent flyer miles:
  - I think I only provided entire redemptions. There weren't part cash and part Avios.
  - Cemlyn-Jones first Dep., March 17, 2015, p. 48.
- 67. BA also produced information on how many frequent flyer miles were used for each booking, and in some cases, how many miles were re-deposited back to the Executive accounts. A very small number of tickets (0.1% of total) in the ICW data appear to have been refunded (re-deposited miles completely cover used miles). However, the YQ charges appear not to have been refunded for these tickets. Therefore, I have not excluded them from the analysis.
- 68. I have used the GBP/USD daily exchange rates posted by the Federal Reserve in H-10 data release.

48. Figure 9 below reports basic statistics for the bookings included in the ICW database. As that figure shows, during the class period members of the proposed class booked roughly

by members of the proposed class increased from \$111 per ticket in 2006 to \$381 per ticket in 2013, an increase of 240 percent.

Figure 9

### **BA YQ Charges to Members of the Proposed Class**

Year	# of Tickets	# of Sectors	Total YQ Charge(USD)	YQ Charge per Ticket (USD)
	_			

Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621).

ICW data received on 04 15 2015 (BA00174625, BA00174626).

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings

made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

The average YQ Charge paid

49.			

Figure 10

#### **Routes Most Commonly Flown by Class Members**

			# of	Total Fuel Surcharge	% of		% of
Sector 1	Sector 2	Route Type	Routes	(USD)	Total	# of Tickets	Total
	00000	noute Type		(882)	. Otta	C. Hekets	10101
							-
		-					
		_					
-		_					
-							

Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626). Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

50. Figure 11 shows the distribution of service classes associated with the tickets booked by Class members. Overall, 44 percent of the tickets booked were for economy (including booking classes X and P); 25 percent were for

business class (booking class U); 7 percent were for first class (booking class Z); and 24 percent were tickets that included other booking classes or multiple classes of service.

Class of Service for Tickets Booked by Class Members

Figure 11

	Total Fuel				Fuel Surcharge
	Surcharge	% of		% of	per Ticket
<b>Booking Class</b>	(USD)	Total	# of Tickets	Total	(USD)
Total					
		_			

Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626). Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings made prior to January 31, 2012.

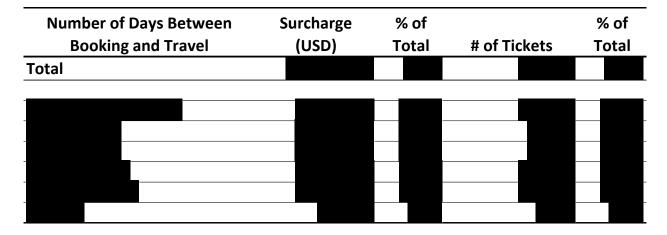
A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

51. Figure 12 shows the time in advance of travel that Class members booked their tickets. It shows that roughly 57 percent of Class members booked their tickets within 90 days of travel, and 80 percent of Class members booked their tickets within 180 days of travel.

Figure 12

## Length of Time Before Travel That Class Members Booked Their Tickets



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621).

ICW data received on 04 15 2015 (BA00174625, BA00174626).

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges

for bookings made prior to January 31, 2012. A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

Other category includes tickets where travel date preceeds booking date or where travel date is more

than 360 days after booking date.

### V. BOTH LIABILITY AND DAMAGES CAN BE DETERMINED FORMULAICALLY ON A CLASS-WIDE BASIS

#### A. ECONOMIC ISSUES THAT BEAR ON CLASS CERTIFICATION

52. I understand from Counsel that, in order for this class to be certified,

#### Plaintiffs must demonstrate that

- Each class member's claim arises from the same course of events;
- All (or nearly all) of the class members have been injured;

- The named class representatives do not have interests that are antagonistic to the claims of other class members;
- Issues that can be determined on a class-wide basis predominate over those that require individual inquiry.
- 53. All four of these statements are true with respect to the relevant economic issues in this litigation:
  - First, every proposed Class member's claim requires the finder of fact to answer a single question—whether BA's YQ Charges were, in fact, fuel surcharges. As a matter of economics, either all of the YQ Charges were fuel surcharges or none of them were. While BA varied the dollar amount of the YQ Charges over time, the basic economic question is the same for all Class members. 69
  - Second, should the finder of fact determine that BA's YQ Charges
    were not fuel surcharges, every member of the proposed class will
    have suffered an economic injury through the same mechanism: he
    or she will have paid money to BA (by way of a YQ Charge) to which

69.

BA was not legally entitled. While the actual money damages will vary by class member, the damages themselves occurred through the same mechanism.

- Third, I conclude that there is no economic sense in which the named Class representatives' claims are antagonistic to the claims of any other Class member. Among other things, the named class representatives would not recover damages unless the other Class members also recovered damages, and no class member would be worse off if the Plaintiffs should prevail. Similarly, from an economic perspective, the claims of class representatives are no more difficult to demonstrate than the claims of absent Class members.
- Finally, as described in this report, there are no material individual economic issues in this case. To the contrary, all of the economic issues in this case can be addressed on a class-wide basis.
- B. DAMAGES FOR INDIVIDUAL MEMBERS OF THE PROPOSED CLASS CAN BE CALCULATED EASILY IN A FORMULAIC FASHION
- 54. In addition to showing that members of the class have all suffered a common injury, I note that damages for each of the members can be calculated using a common methodology. This does not mean that everyone has been damaged by the same amount—only that everyone has potentially been damaged

by the same mechanism. Put differently, the actual amount that each member of the Class paid in YQ Charges is known. In addition, I have calculated the amount that each member "would have paid" in the "but-for" world (i.e., the hypothetical situation in which BA had not engaged in the alleged misconduct). Damages are simply the difference between the two.<sup>70</sup>

## VI. DAMAGES TO THE CLASS UNDER DIFFERENT ASSUMPTIONS RANGE FROM

- 55. I have explained the basis for my opinion that, as a matter of economics, the YQ Charges imposed by BA were not related to changes in fuel prices and thus cannot be considered fuel surcharges. This supports the legal proposition that, by imposing these charges, BA breached its contract with the members of the proposed class.<sup>71</sup> It is not that the charges were slightly higher or lower than they should have been, but rather that they were unrelated to any relevant fuel price (or fuel cost) benchmark.
- 56. I understand from counsel that, as a legal matter, the measure of damages in a breach of contract case, such as this one, is an amount that would

<sup>70.</sup> It is possible that there will be Class members who paid very little in YQ Charges in certain alternative damages models described below. To the extent that the amount paid is below the appropriate but-for amount, these members will not have suffered damages, but this eventuality is easily taken care of with my methodology.

<sup>71.</sup> In this section of my report, I assume that the finder of fact will find in favor of the class with respect to liability.

place Plaintiffs in a position that is as good as the one in which they would have been placed had the defendant (i.e., in this case BA) never breached the contract.

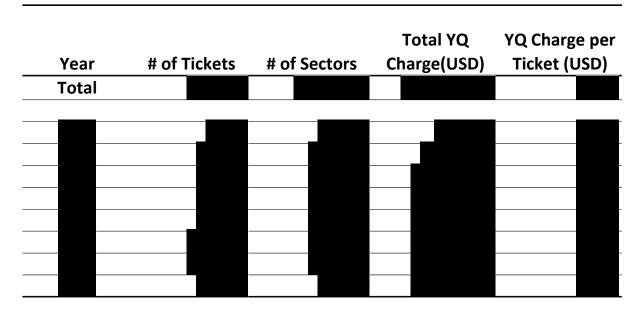
I further understand that, under English Law, this standard bases damages on alternative, commercially reasonable conduct that would not have breached the contract.

- A. BECAUSE OF BRITISH AIRWAYS' ABILITY TO RAPIDLY CHANGE FARES, BRITISH AIRWAYS COULD RESPOND TO GENERALLY INCREASING FUEL PRICES WITHOUT FUEL SURCHARGES.
- 57. As discussed above, BA's YQ Charge was simply one element of the overall price that consumers paid. BA had the ability to simply adjust its fares to account for changes in its costs, and thus could simply have adjusted fares up or down to account for fluctuations in fuel costs. In that case, fuel surcharges would have been zero. Under this measure, damages in this case are equal to the total amount BA collected from members of the proposed class,

(See Figure 13.)

Figure 13

# Aggregate Damages to Class Members: BA YQ Charges by Year



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621).

ICW data received on 04 15 2015 (BA00174625, BA00174626);

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for

bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

58. BA also engaged in activities that reduced fuel price (or cost) uncertainty, which would have increased its ability to respond to fluctuations in global fuel prices by adjusting its fares. In particular, BA had an active fuel hedging program that was used to minimize its exposure to fuel price volatility. Hedging is a technique used by firms exposed to risk from fluctuations in

commodity prices to minimize that risk through the use of financial instruments such as futures, options and swaps. Hedging allows companies to know with increased certainty what their actual fuel costs in the future. BA typically hedged a large portion of its expected fuel consumption. For example, its 2007 Annual Report noted that "[o]ur hedging cover has increased with some 72 per cent cover for the first half of the year and just under 60 per cent for the second half." Thus, in 2007, BA already knew with certainty what its costs would be with respect to 60 or 70 percent of the fuel it consumed before it consumed that fuel. Consequently, the unexpected portion of BA's fuel cost fluctuations is a small part of the total variation in fuel prices. BA's fuel hedging activities were not confined to 2007, as Mr. Nick Swift, BA's CFO, testified that BA's hedging profile was relatively consistent during the class period.

59. As mentioned above, BA considered the existence of the YQ Charge

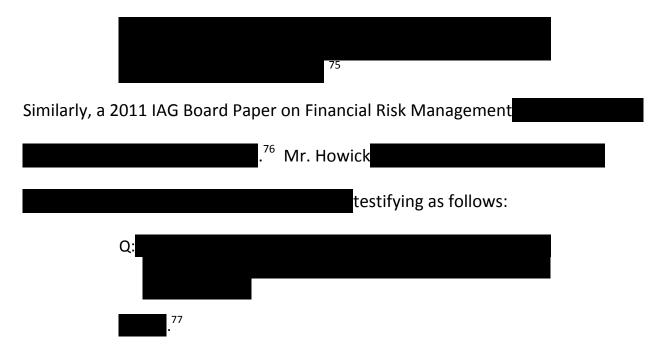
Indeed, Mr. Ian Howick, the former Head of

Treasury at BA, testified that

<sup>72.</sup> The extent of this certainty regarding future fuel costs depends on the extent of hedging activity.

<sup>73.</sup> British Airways Preliminary Results Announcement, Period April 1, 2007- March 31, 2008, p. 3.

<sup>74.</sup> Swift Dep., pp. 124-25.



60. In light of these statements, in the counterfactual hypothetical scenario of no breach (i.e., no YQ Charge), it is reasonable to assume BA would have increased its hedging activities to mitigate its fuel price risk.

### B. BRITISH AIRWAYS COULD HAVE DESIGNED A FUEL SURCHARGE PROGRAM ACTUALLY RELATED TO ITS COST OF FUEL

61. While BA had the ability control for the changes in fuel prices or fuel costs by adjusting its fares, if it had decided to impose a fuel surcharge on its customers, it could have designed a program that was actually related to its fuel costs. I describe below several alternative approaches that BA could have

<sup>75.</sup> Howick Dep., p. 42.

<sup>76.</sup> BA00062506.

<sup>77.</sup> Howick Dep., p. 56.

implemented in arriving at a fuel surcharge program that reflected either changes in BA's actual fuel costs or changes in fuel prices. I take as a starting point that BA would periodically adjust its base fares to account for overall supply and demand factors, competitive conditions and changes in its operating costs, including its fuel costs. I am informed by Mr. Robert Kokonis that, in his expert opinion, BA easily could have adjusted its fares every 90 days to account for these factors. Given this, an economically appropriate fuel surcharge would attempt to recover unanticipated fuel costs from the time the fares were reset each quarterly period. While BA could have done this in a number of ways, I discuss below five approaches that BA could have adopted.

62. Statements by BA executives confirm that BA could have designed a reasonable fuel surcharge that would have adjusted periodically to reflect unexpected changes in fuel prices or fuel costs.

As explained by Mr. Ian Howick, BA's former Head of Treasury,

<sup>78.</sup> See Kokonis Report, §III.A.



, it is a relatively straightforward matter to design a fuel surcharge that would recover that budget shortfall, either by calculating a fuel surcharge based on the distance of a BA route, or by adjusting some level of fuel surcharge to reflect the unexpected change in fuel costs. <sup>80</sup> Conceptually, each of the alternatives I outline below follows this approach.

## 1. ALTERNATIVE 1: A FUEL SURCHARGE BASED ON QUARTERLY CHANGES IN FUEL COSTS



surcharges could be based on looking at the change in BA's actual fuel costs from

<sup>79.</sup> Howick Dep., p. 28.

<sup>80.</sup> My staff and I continue to review documents BA produced in discovery which report its budgeted fuel costs. To the extent sufficient information on BA's budgeted fuel costs exists in the discovery record, I may supplement my damage calculations to reflect a hypothetical fuel surcharge that reflects the difference between BA's actual and budgeted fuel costs.

the prior quarter.<sup>81</sup> Suppose that BA's actual fuel costs increased by £100 million from first quarter to second quarter of a given year and that BA had 38 billion available seat kilometers (ASKs)<sup>82</sup> in capacity in that quarter with an expected capacity utilization, or "load factor," of 70 percent. In this case the fuel surcharge would be £0.0038 per kilometer.<sup>83</sup> Thus, the fuel surcharge on a flight between New York's JFK Airport and London's Heathrow Airport, which is 5,554 kilometers in distance, would be £20.88. Appendix 4 reports BA's fuel costs, ASKs, and load factors, and calculates the change in BA's fuel costs per Revenue Passenger Kilometer (RPK), which would be the fuel surcharge per kilometer under this approach.<sup>84</sup> For example, between 2008 Q2 and 2008 Q3, the change in BA's fuel

<sup>81.</sup> This approach is conservative in the sense that it treats all fuel cost changes as unanticipated.

<sup>82.</sup> ASKs are a standard measure of capacity used in the airline industry, and reflect the product of the total seats on airplanes and the distance those airplanes fly. Dividing ASKs by the load factor yields Revenue Passenger Kilometers (RPKs).

<sup>83.</sup> This is computed as £100 million divided by 38 billion kilometers, which is then further divided by 70 percent. The result is £0.0038 per kilometer.

<sup>84.</sup> I have relied on BA and IAG quarterly reports available at http://www.iairgroup.com/phoenix.zhtml?c=240949&p=irol-reportsother. I useBA quarterly statements through 4Q10 and, IAG quarterly statements starting 1Q2011. Fuel costs, ASK, and RPK were imputed in quarters reporting cumulative results by differencing. Where exact numbers were not reported, fuel costs, ASK, RPK were imputed using percentage changes relative to prior periods. RPK in 2009 Q2 and 2010 Q2 was imputed by assuming the same percentage change relative to prior periods as for ASK. I have converted quarterly data from BA/IAG reports expressed in GBP or EUR to USD using average quarterly exchange rates calculated using data posted by the Federal Reserve in its H-10 data release.

costs per RPK was \$0.004035. For a flight between JFK and Heathrow booked in 2008 Q3, this would result in a fuel surcharge of \$22.41. Appendix 5 reports the quarterly aggregate actual YQ Charges, but-for fuel surcharges, and damages under this approach.

- 2. ALTERNATIVE 2: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL COSTS PRIOR TO BA'S IMPOSITION OF THE £2.50 YQ CHARGE IN MAY 2004
- 65. BA has offered no justification for the initial £2.50 YQ Charge it adopted in May 2004. For example, BA testified that

have seen no evidence to suggest that £2.50 was an appropriate fuel surcharge, I

assume for the sake of argument, that it was. Logically this would imply that the £2.50 charge was directly related to the incremental change in BA's fuel costs between 2004 Q1 and 2004 Q2, or \$0.001351 RPK. Thus, if in some other period the incremental change in BA's fuel costs was \$0.002702 per RPK, i.e., twice \$0.001351, the but-for fuel surcharge under this approach would be £5.00. Appendix 6 reports the quarterly aggregate actual YQ Charges, but-for fuel surcharges, and damages under this alternative.

<sup>85.</sup> Foran 30(b)(6) Dep., p. 21.

- 3. ALTERNATIVE 3: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL PRICES PRIOR TO BA'S IMPOSITION OF THE £2.50 YQ CHARGE IN MAY 2004
- materially different if they were based on changes in global fuel prices, rather than BA's fuel costs. Appendix 7 reports the average quarterly prices of Brent crude oil, as well as the quarterly changes in those prices. Similar to the previous alternative, a but-for fuel surcharge assuming that the May 2004 £2.50 YQ Charge reflected changes in fuel prices would imply that the change in Brent Crude Oil Prices between 2004 Q1 and 2004 Q2, \$3.50 per barrel, would result in a fuel surcharge of £2.50. Thus, if fuel prices increased by \$7.00 per barrel, the but-for fuel surcharge under this approach would be £5.00. Appendix 8 reports the quarterly aggregate actual YQ Charges, but-for fuel surcharges, and damages under this alternative.
  - 4. ALTERNATIVE 4: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL COSTS WHEN BA COLLUSIVELY INCREASED ITS YQ CHARGE FROM £2.50 IN MAY 2004 TO £6.00 IN AUGUST 2004
- 67. I understand that, in response to an investigation by the UK's Office of Fair Trading (OFT), BA agreed to plead guilty to colluding with Virgin Atlantic

<sup>86.</sup> I use Brent crude oil prices in this calculation, as BA has stated that its YQ Charges were intended to "reflect the fluctuating price of worldwide oil." Complaint, ¶9.

Airways, Ltd. in setting the level of the YQ Charge between August 2004 and January 2006.<sup>87</sup> As a matter of economics, the YQ Charge that was subject to the collusion between BA and Virgin Atlantic is above that which would have prevailed in the absence of the collusion, and thus provides an upper bound on the fuel surcharge that BA would have charged had the collusion not occurred. I have therefore assumed that the YQ Charge that prevailed in August 2004, £6, is the upper bound of a competitive fuel surcharge in the but-for world. Similar to Alternative 3 above, I assume that the change in BA's fuel costs between 2004 Q2 and 2004 Q3 could result in no more than the collusive increase in the YQ Charge over this period, £3.50 (i.e., £6.00 minus £2.50). Appendix 9 reports the quarterly aggregate actual YQ Charges, but-for fuel surcharges, and damages under this alternative.

- 5. ALTERNATIVE 5: A FUEL SURCHARGE BASED ON THE INCREMENTAL FUEL PRICES WHEN BA COLLUSIVELY INCREASED ITS YQ CHARGE FROM £2.50 IN MAY 2004 TO £6.00 IN AUGUST 2004
- 68. I have also analyzed whether but-for fuel surcharges would be materially different if they were based on changes in global fuel prices, rather than BA's fuel costs. Similar to the previous alternative, a but-for fuel surcharge

<sup>87.</sup> UK Office of Fair Trading, <u>Decision: Airline passenger fuel surcharges for long-haul flights</u>, Case CE/7691-06, 19 April 2012, ¶3, ¶23. BA agreed to pay a fine of £58.5 million to settle these charges. ¶39.

assuming that the increase in the YQ Charge between May 2004 and August 2004 of £3.50 YQ Charge reflected changes in fuel prices over the period would imply that the change in Brent crude oil Prices between 2004 Q1 and 2004 Q2, \$5.96 per barrel, would result in a £3.50 fuel surcharge. Thus, if fuel prices increased by \$11.92 per barrel, or twice \$5.96, the but-for fuel surcharge under this approach would be £7.00. Appendix 10 reports the quarterly aggregate actual YQ Charges, but-for fuel surcharges, and damages under this alternative.

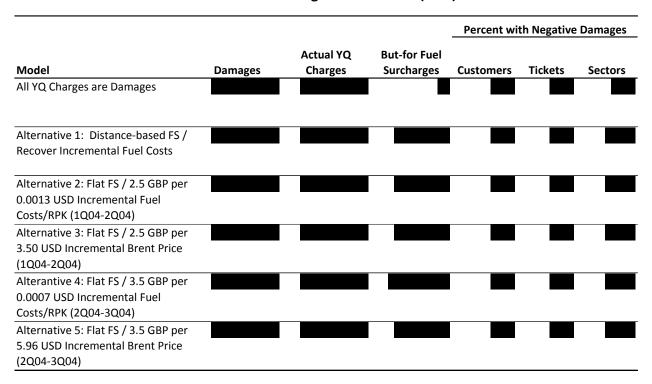
#### C. DAMAGES BASED ON ALTERNATIVE SCENARIOS

attempts by BA to adjust its prices to reflect fluctuations in its fuel costs, either directly or through economically reasonable fuel surcharges. Figure 14 below presents damages to the Class members based on these alternative approaches to estimating a but-for fuel surcharge. As can be seen in that figure, damages under these alternative scenarios range from a Moreover, this table indicates that these alternative damages approaches indicate that the vast majority of Class members suffered damage under these scenarios, with between 97 percent and 100 percent of Class members suffering economic harm, depending on the approach. I understand

that damages in this matter ultimately will be based upon which alternative the trier of fact determines to be most reasonable.

Figure 14

#### **Alternative Damages Calculations (USD)**



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621);

ICW data received on 04 15 2015 (BA00174625, BA00174626); BA and IAG quarterly reports; EIA;

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings made prior to January 31, 2012.

A customers is defined as a unique customer ID number. A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

BA quarterly statements are used before 4Q10, IAG quarterly statements starting 1Q2011.

The BA and IAG data were converted to USD using average quarterly GBP/USD and EUR/USD exchange rates.

Fuel costs, ASK, and RPK were imputed in quarters with cumulative 6, 9, or 12 months results by differencing.

Fuel costs, ASK, RPK were imputed using percentage changes relative to prior periods where exact numbers were not reported.

 $RPK\ in\ 2009Q2\ and\ 2010Q2\ \ were\ imputed\ by\ assuming\ the\ same\ percentage\ change\ relative\ to\ prior\ periods\ as\ for\ ASK.$ 

May 4, 2015

Jonathan I. Arnold, Ph.D.

## **CURRICULUM VITAE**

## Jonathan I. Arnold, Ph.D.

#### **OFFICE ADDRESS:**

854 W. Oakdale Avenue Chicago, IL 60657 direct 312.352.4200 fax 312.322.0218 jarnold@compasslexecon.com

## **EDUCATION:**

Ph.D. Business Economics, Graduate School of Business, The University of Chicago M.B.A. Finance and Accounting, The University of Chicago Graduate School of Business B.A. Economics, The University of Chicago

## PROFESSIONAL EXPERIENCE:

2013 –	Senior Advisor, Compass Lexecon
2013 –	Chicago Economics Corp.
2012 - 2013	Chief Economist, Office of the Attorney General, New York State
2006 - 2012	Managing Principal, Analysis Group, Inc.
1995 - 2006	Principal, Chicago Partners
1987 – 1995	Vice President, Lexecon

## **TEACHING EXPERIENCE:**

- Columbia University and Duke University Guest Lecturer (2002 – 2004)
- The University of Chicago, Department of Economics and Graduate School of Business Lecturer (1998 – 1999)

Taught microeconomics (topics included price theory, industrial organization, capital theory, principles of labor economics, and durable goods economics)

• Loyola University Chicago School of Law

Lecturer of Law (1997 – 1998) Taught antitrust economics

## **TESTIMONY – SINCE 2010:**

- Expert Report in Thomas & Betts International v. Burny, U.S.District Court, Western District of Tennessee, Case No. 2:14-cv-02296-JPM-tmp. (April 2015)
- Testimony in Jo Ann Howard and Associates v. J. Douglas Cassity, et al., U.S. District Court Eastern District of Missouri, Case No. 09-CV-1252-ERW. (March 2015)
- Videotaped Depositions in Jo Ann Howard and Associates v. J. Douglas Cassity, et al., U.S. District Court Eastern District of Missouri, Case No. 09-CV-1252-ERW. (February 2015)
- Videotaped Depositions in Jo Ann Howard and Associates v. J. Douglas Cassity, et al., U.S. District Court Eastern District of Missouri, Case No. 09-CV-1252-ERW. (January 2015)
- Expert Report in Jo Ann Howard and Associates v. J. Douglas Cassity, et al., U.S. District Court Eastern District of Missouri, Case No. 09-CV-1252-ERW. (January 2015)
- Reply declaration in Cryolife, Inc. v. C.R. Bard, Inc., U. S. District Court of the District of Delaware, Case No. CV-14-00559-SLR. (January 2015)
- Declaration in Cryolife, Inc. v. C.R. Bard, Inc., U. S. District Court of the District of Delaware, Case No. CV-14-00559-SLR. (September 2014)
- Videotaped Depositions in Jo Ann Howard and Associates v. J. Douglas Cassity, et al., U.S. District Court Eastern District of Missouri, Case No. 09-CV-1252-ERW. (August 2014)
- Expert Report in Jo Ann Howard and Associates v. J. Douglas Cassity, et al., U.S. District Court Eastern District of Missouri, Case No. 09-CV-1252-ERW. (July 2014)
- Testimony in SolidFX, LLC v. Jeppesen Sanderson, Inc., U.S. District Court, District of Colorado, Case No. 11-CV-1468. (April 2014)
- Supplemental expert report in SolidFX, LLC v. Jeppesen Sanderson, Inc., U.S. District Court, District of Colorado, Case No. 11-CV-1468. (April 2014)
- Deposition in Noble Systems Corporation v. TRG Holdings LLC, JAMS, Case No. 1440003731. (April 2014)
- Expert report in Noble Systems Corporation v. TRG Holdings LLC, JAMS, Case No. 1440003731. (March 2014)
- Affidavit in Lena K Thosos and David Miller, et al vs. Nicor, Inc. Northern Illinois Gas Company, U.S. Circuit Court of Cook County, Illinois County Department, Chancery Division, Case No. 11CH06556. (February 2014)
- Testimony in C. Geoffrey Hampson, Christopher Hampson, and Hampson Equities, Ltd., v Live Current Media, Inc. and David Jeffs, JAMS, Case No. 1260002566. (October 2013)
- Deposition in C. Geoffrey Hampson, Christopher Hampson, and Hampson Equities, Ltd., v Live Current Media, Inc. and David Jeffs, JAMS, Case No. 1260002566. (October 2013)
- Expert report in C. Geoffrey Hampson, Christopher Hampson, and Hampson Equities, Ltd., v Live Current Media, Inc. and David Jeffs, JAMS, Case No. 1260002566. (September 2013)

- Testimony in AM General, LLC v. BAE Systems, Inc., et al., St. Joseph Superior Court, State of Indiana County of St. Joseph, Case No. 71D07-0907-PL-00195. (October 2012)
- Deposition in SolidFX, LLC v. Jeppesen Sanderson, Inc., U.S. District Court, District of Colorado, Case No. 11-CV-1468. (February 2012)
- Deposition in AM General, LLC v. BAE Systems, Inc., et al., St. Joseph Superior Court, State of Indiana County of St. Joseph, Case No. 71D07-0907-PL-00195. (May 2012)
- Supplemental Expert Report in AM General, LLC v. BAE Systems, Inc., et al., St. Joseph Superior Court, State of Indiana County of St. Joseph, Case No. 71D07-0907-PL-00195. (April 2012)
- Rebuttal Expert Report in AM General, LLC v. BAE Systems, Inc., et al., St. Joseph Superior Court, State of Indiana County of St. Joseph, Case No. 71D07-0907-PL-00195. (April 2012)
- Expert Report in AM General, LLC v. BAE Systems, Inc., et al., St. Joseph Superior Court, State of Indiana County of St. Joseph, Case No. 71D07-0907-PL-00195. (March 2012)
- Expert report in SolidFX, LLC v. Jeppesen Sanderson, Inc., U.S. District Court, District of Colorado, Case No. 11-CV-1468. (February 2012)
- Deposition in Edgenet, Inc. v. Home Depot U.S.A., Inc., and James Musial, State of Wisconsin, Circuit Court, Waukesha County, Case No. 10-CV-10910. (December 2011)
- Expert report in Edgenet, Inc. v. Home Depot U.S.A., Inc., and James Musial, State of Wisconsin, Circuit Court, Waukesha County, Case No. 10-CV-10910. (October 2011)
- Testimony in BGCantor Market Data, L.P. v. Tullett Prebon Americas Corp., American Arbitration Association, Case No. 50-148-T-00737-10. (September 2011)
- Deposition in BGCantor Market Data, L.P. v. Tullett Prebon Americas Corp., American Arbitration Association, Case No. 50-148-T-00737-10. (July 2011)
- Second Supplemental Expert report in BGCantor Market Data, L.P. v. Tullett Prebon Americas Corp., American Arbitration Association, Case No. 50-148-T-00737-10. (July 2011)
- Supplemental Expert report in BGCantor Market Data, L.P. v. Tullett Prebon Americas Corp., American Arbitration Association, Case No. 50-148-T-00737-10. (July 2011)
- Expert report in MBDA UK Limited v. Raytheon Company, American Arbitration Association, Case No. 50-180-T-00462-04. (June 2011)
- Expert report in BGCantor Market Data, L.P. v. Tullett Prebon Americas Corp., American Arbitration Association, Case No. 50-148-T-00737-10. (June 2011)
- Testimony in Agility Defense & Government Services, Inc. v. DynCorp International, LLC, American Arbitration Association, Case No. 13-132-00990-10. (April 2011)
- Deposition in Agility Defense & Government Services, Inc. v. DynCorp International, LLC, American Arbitration Association, Case No. 13-132-00990-10. (March 2011)
- Testimony in Citadel Investment Group, L.L.C. v. Matthew B. Hinerfeld, American Arbitration Association, Case No. 51 116972 09. (February 2011)

- Deposition in Citadel Investment Group, L.L.C. v. Matthew B. Hinerfeld, American Arbitration Association, Case No. 51 116972 09. (February 2011)
- Expert report in Citadel Investment Group, L.L.C. v. Matthew B. Hinerfeld, American Arbitration Association, Case No. 51 116972 09. (February 2011)
- Expert report in Agility Defense & Government Services, Inc. v. DynCorp International, LLC, American Arbitration Association, Case No. 13-132-00990-10. (December 2010)
- Arbitration testimony in ADA-ES, Inc., et al. v. Norit Americas, Inc., American Arbitration Association, Case No. 13-132- Y 00718 09. (October 2010)
- Deposition in ADA-ES, Inc., et al. v. Norit Americas, Inc., American Arbitration Association, Case No. 30 192 Y 00718 09. (July 2010)
- Expert report in ADA-ES, Inc., et al. v. Norit Americas, Inc., American Arbitration Association, Case No. 30 192 Y 00718 09. (July 2010)
- Deposition in Citadel Investment Group, L.L.C. et al. v. Mikhail Malyshev and Jace Kohlmeier and Mikhail Malyshev and Jace Kohlmeier v. Citadel Investment Group, L.L.C. and CIG GP, L.L.C., American Arbitration Association, Case No. AAA 51 166 00969 09 and Case No. AAA 51 166 00970 09. (June 2010)
- Expert report in Citadel Investment Group, L.L.C. et al. v. Mikhail Malyshev and Jace Kohlmeier and Mikhail Malyshev and Jace Kohlmeier v. Citadel Investment Group, L.L.C. and CIG GP, L.L.C., American Arbitration Association, Case No. AAA 51 166 00969 09 and Case No. AAA 51 166 00970 09. (June 2010)
- Expert report in Citadel Investment Group, L.L.C. et al. v. Mikhail Malyshev and Jace Kohlmeier and Mikhail Malyshev and Jace Kohlmeier v. Citadel Investment Group, L.L.C. and CIG GP, L.L.C., American Arbitration Association, Case No. AAA 51 166 00969 09 and Case No. AAA 51 166 00970 09. (June 2010)
- Deposition in Marc S. Kirschner v. Thomas H. Lee Partners L.P., et al., U.S. District Court, Southern District of New York, Case No. 07 CIV 7074. (June 2010)
- Expert report in Marc S. Kirschner v. Thomas H. Lee Partners L.P., et al., U.S. District Court, Southern District of New York, Case No. 07 CIV 7074. (April 2010)

## PROFESSIONAL AFFILIATIONS:

American Economic Association

## **OTHER:**

Certified Public Accountant

## **MATERIALS RELIED UPON**

### **Court Documents:**

UK Office of Fair Trading, <u>Decision: Airline passenger fuel surcharges for long-haul flights</u>, Case CE/7691-06, 19 April 2012

Russell Dover et.al, v. British Airways, PLC (UK), Memorandum & Order, November 8, 2013

Russell Dover et. al, v. British Airways, PLC (UK), Amended Class Action Complaint, January 9, 2015

Russell Dover et. al, v. British Airways, PLC (UK), Defendant's Responses and Objections to Plaintiffs' Second Set of Requests for Admission, February 18, 2015

### **Depositions:**

Deposition and Exhibits of Jo Boswell, February 12, 2015

Deposition and Exhibits of Charles Wynne Cemlyn-Jones, March 17, 2015

Deposition and Exhibits of Charles Wynne Cemlyn-Jones, April 9, 2015

Deposition and Exhibits of Andrew Crawley, March 12, 2015

Deposition and Exhibits of Adam Daniels, March 10, 2015

Deposition and Exhibits of Andrew Fleming, September 16, 2014

Deposition and Exhibits of Jerry J. Foran, February 26, 2015

Deposition and Exhibits of Gavin Halliday, January 29, 2015

Deposition and Exhibits of William Townsend Heald, April 28, 2015

Deposition and Exhibits of Ian Howick, February 13, 2015

Deposition and Exhibits of Sharon Mickelson, April 2, 2015

Deposition and Exhibits of Mark Pickard, February 11, 2015

Deposition and Exhibits of Nick Swift, March 18, 2015

Deposition and Exhibits of Joerg Tuensmeyer, March 11, 2015

Deposition and Exhibits of John Walker, Jr., February 10, 2015

Deposition and Exhibits of Jon Wells, January 27, 2015

Deposition and Exhibits of Keith Williams, March 13, 2015

## **Expert Reports:**

Expert Report of Robert J. Kokonis

## **Bates Numbered Documents:**

BA00062506	BA00123574
BA00075989	BA00123621
BA00076004	BA00123693
BA00076034	BA00123694
BA00076054	BA00133436
BA00076055	BA00153304
BA00078962	BA00156278
BA00085850	BA00158602
BA00088730	BA00160729
BA00088731	BA0017344
BA00088732	BA00174228

## **Public Sources:**

Airline Tariff Publishing Company, available at: <a href="http://www.atpco.net/about-atpco">http://www.atpco.net/about-atpco</a>

## **British Airways Data Sources:**

ATPCO data received on December 2, 2014

ICW data received on April 3, 2015 (BA00174616-BA00174621)

ICW data received on April 15, 2015 (BA00174625, BA00174626)

### **Public Data Sources:**

British Airlines Quarterly Reports, available at: http://www.iairgroup.com/phoenix.zhtml?c=240949&p=irol-reportsother

Preliminary Financial Results 2002-2003

First Quarter Results 2003-2004

British Airways Interim Results 2003-2004

British Airways Third Quarter Results 2003-2004

Preliminary Financial Results 2003-2004

First Quarter Results 2004-2005

British Airways Interim Results 2004-2005

British Airways Third Quarter Results 2004-2005

British Airways Preliminary Financial Results 2004-2005

British Airways First Quarter Results 2005-2006

British Airways Interim Results 2005-2006

British Airways Third Quarter Results 2005-2006

British Airways Preliminary Financial Results 2005-2006

British Airways First Quarter Results 2006-2007

British Airways Interim Results 2006-2007

British Airways Third Quarter Results 2006-2007

British Airways Preliminary Financial Results 2006-2007

British Airways Interim Management Statement Period April 1, 2007 – June 30, 2007

British Airways Interim Management Report, Period April 1, 2007 – September 30, 2007

British Airways Interim Management Statement, Period April 1, 2007 – December 31, 2007

British Airways Preliminary Results Announcement, Period April 1, 2007 – March 31, 2008

British Airways Interim Management Statement, Period April 1, 2008 – June 30, 2008

British Airways Interim Management Report, Period April 1, 2008 – September 30, 2008

Interim Management Statement, Period April 1, 2008 – December 31, 2008

Preliminary Results Announcement, Year April 1, 2008 – March 31, 2009

British Airways Interim Management Statement, Period April 1, 2009 – June 30, 2009

British Airways Interim Management Report, Period April 1, 2009 – September 30, 2009

British Airways Interim Management Statement, Period April 1, 2009 – December 31, 2009

British Airways Preliminary Results Announcement, Year April 1, 2009 – March 31, 2010

British Airways Interim Management Statement, Period April 1, 2010 – June 30, 2010

British Airways Preliminary Results Announcement, Period April 1, 2010 – September 30, 2010

British Airways Results Announcement, Nine month period April 1, 2010 – December 31, 2010

Federal Reserve Exchange Rates, H-10 data release, downloaded March 9, 2015, available at: http://www.federalreserve.gov/releases/h10/Hist/

International Airlines Group Quarterly Reports, available at: <a href="http://www.iairgroup.com/phoenix.zhtml?c=240949&p=irol-reportsother">http://www.iairgroup.com/phoenix.zhtml?c=240949&p=irol-reportsother</a>

Quarter 1 Results Announcement, March 31, 2011

Six Months Results Announcement, June 30, 2011

Nine Months Results Announcement, September 30, 2011

Full Year Results Announcement, December 31, 2011

Three Months Results Announcement, March 31, 2012

Six Months Results Announcement, June 30, 2012

Nine Months Results Announcement, September 30, 2012

Full Year Results Announcement, December 31, 2012

Three Months Results Announcement, March 31, 2013

Six Months Results Announcement, June 30, 2013

# Case 1:12-cv-05567-RJD-CLP Document 178-1 Filed 11/20/15 Page 83 of 116 PageID #: 6311

Nine Months Results Announcement, September 30, 2013

Full Year Results Announcement, December 31, 2013

Three Months Results Announcement, March 31, 2014

Six Months Results Announcement, June 30, 2014

Nine Months Results Announcement, September 30, 2014

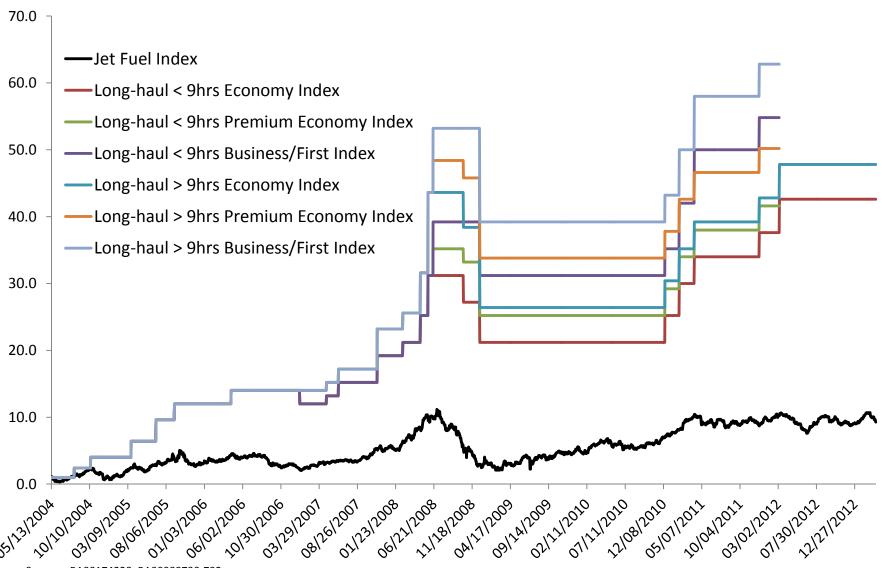
Full Year Results Announcement, December 31, 2014

U.S. Energy Information Administration, Petroleum & Other Liquids Spot Prices, available at: <a href="http://www.eia.gov/dnav/pet/pet\_pri\_spt\_s1\_d.htm">http://www.eia.gov/dnav/pet/pet\_pri\_spt\_s1\_d.htm</a>

# **Table of Contents**

Figure C-1	YQ Charge and Jet Fuel Price Indices (May 13, 2004 = 1)	1
Figure 1	History of BA's YQ Charges	2
Figure 2	Average Duration of BA YQ Charges	3
Figure 3	Quarterly Changes in YQ Charges and Jet Fuel Prices	4
Figure 4	Percentage of Quarters In Which YQ Charge Changed in the Same Direction as Fuel Price	-
Figure 5	YQ Charge and Jet Fuel Price Indices (May 13, 2004 = 1)	6
Figure 6	Percentage of BA Revenue Accounted for by YQ Charges, NLX Shoulder Seaso Fares	
Figure 7	Comparison of YQ Charges and Fares Reported by ATPCO Data, by Year	8
Figure 8	BA Economy Class YQ Charges on Flights Between LON and JFK (in USD)	9
Figure 9	BA YQ Charges to Members of the Proposed Class	10
Figure 10	Routes Most Commonly Flown by Class Members	11
Figure 11	Class Service for Tickets Booked by Class Members	12
Figure 12	Length of Time Before Travel That Class Members Booked Their Tickets	13
Figure 13	Aggregate Damages to Class Members: BA YQ Charges by Year	14
Figure 14	Alternative Damages Calculations (USD)	15

## YQ Charge and Jet Fuel Price Indices (May 13, 2004 = 1)



Sources: BA00174228, BA00088730-732.

Notes: The YQ charge change dates from BA00174228 are used. The jet fuel index based on price differences relative to average jet fuel price in Q1 2004.

# **History of BA's YQ Charges**

		YQ Charges (GBP/Sector)							
		Lo	ng-haul < 9	hrs	Lo	ng-haul > 9	hrs	Short	-haul
			Economy	Business		Economy	Business		
	Jet Fuel	Economy	(World	(Club	Economy	(World	(Club	Economy	Busines
	Costs	(World	Traveler	World)	(World	Traveler	World)	(World	(Club
Date	(GBP/Ton)	Traveler)	Plus)	and First	Traveler)	Plus)	and First	Traveler)	Europe)

Sources: BA00174228, BA00088730-732.

Notes: Highlighted cells denote events when differences across flight distance or booking class were introduced for the first time.

YQ change dates had small differences between BA00174228 and BA00088730 for some events. The dates from BA00174228 are reported.

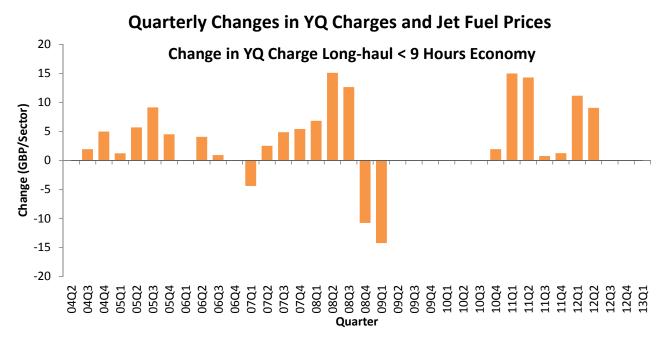
# **Average Duration of BA YQ Charges**

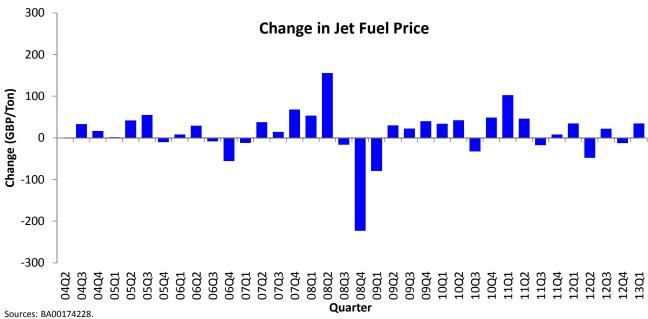
YQ Change	YQ Change Number	YQ in Effect (Days)		

Sources: BA00174228, BA00088730-732.

Notes: Based on May 13, 2004 - March 20, 2013.

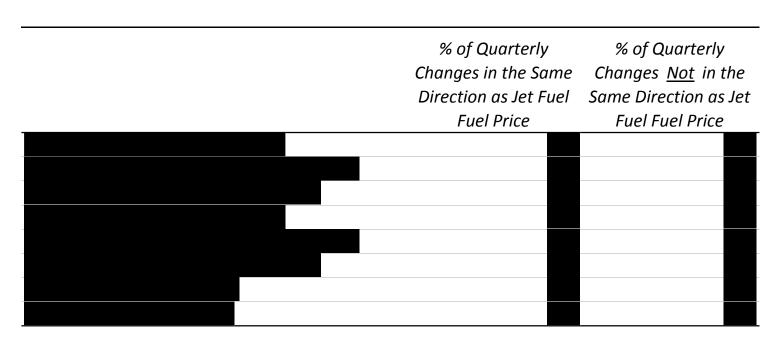
Based on Economy Class Long-Haul Under 9 Hours.





Notes: 04Q2 based on May 13 - June 30, 2004; 13Q1 based on January 1 - March 20, 2013.

# Percentage of Quarters In Which YQ Charge Changed in the Same Direction as Jet Fuel Price



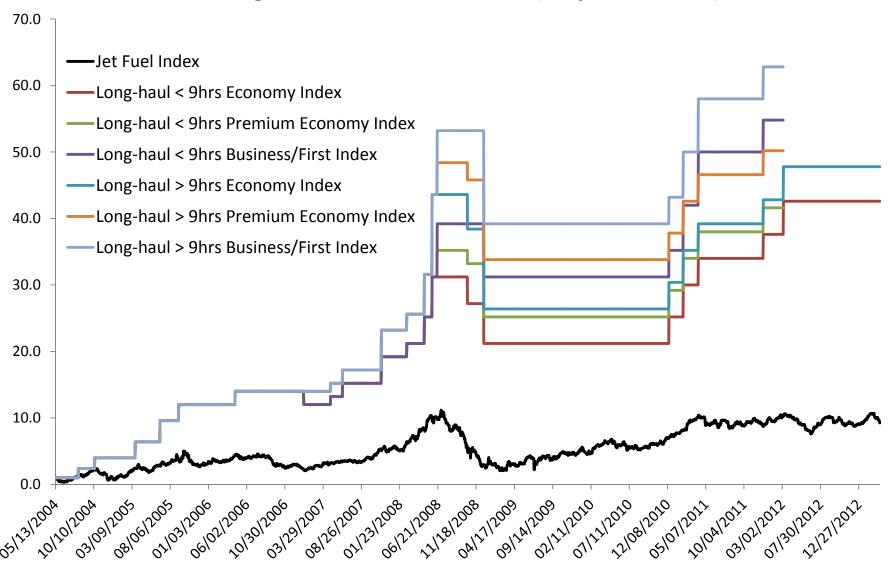
Sources: BA00174228, BA00088730-732.

Notes: Unchanged YQ Charge is counted separatly from positive and negative changes.

Long-haul economy YQ charges based on May 13, 2004 - March 20, 2013.

YQ charges other than long-haul economy based on May 13, 2004 - March 6, 2012.

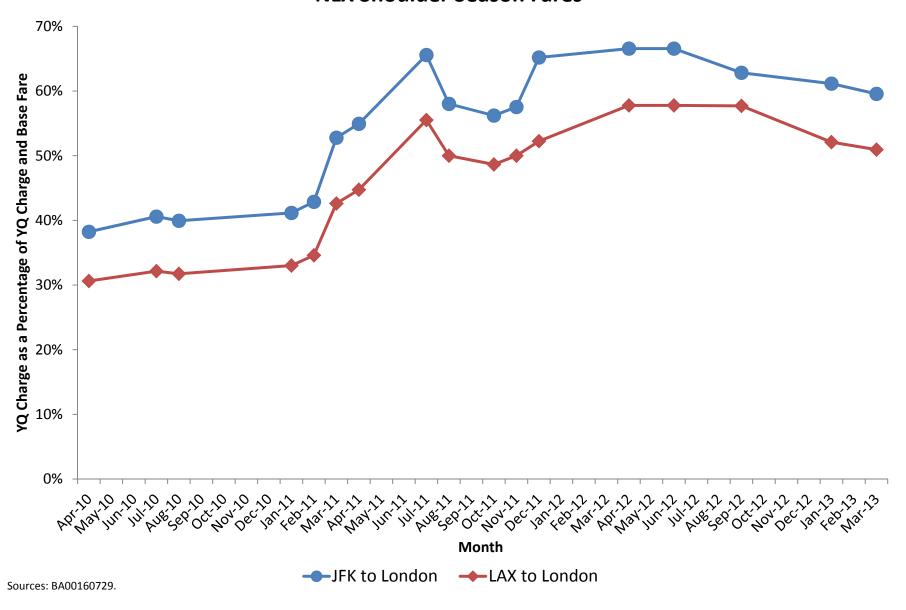
## YQ Charge and Jet Fuel Price Indices (May 13, 2004 = 1)



Source: BA00174228, BA00088730-732,

Notes: The YQ charge change dates from BA00174228 are used. The jet fuel index based on price differences relative to average jet fuel price in Q1 2004.

# Percentage of BA Revenue Accounted for by YQ Charges NLX Shoulder Season Fares



# Comparison of YQ Charges and Fares Reported by ATPCO Data by Year

		Average Ratio of YQ Charge/(YQ Charge+Fare)				entile of YQ C Charge+Fare)	<b>O</b>
	# of	Lowest Listed Fare (in Effect for 30+	2nd Lowest Listed Fare (in Effect for 30+	3rd Lowest Listed Fare (in Effect for 30+	Lowest Listed Fare (in Effect for 30+	2nd Lowest Listed Fare (in Effect for 30+	3rd Lowest Listed Fare (in Effect for 30+
		_	_	_		_	_
Month	Tickets	Days)	Days)	Days)	Days)	Days)	Days)

Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626); ATPCO data received on 12 02 2014; Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: Based on YQ surcharges with 'X (Economy)' booking class.

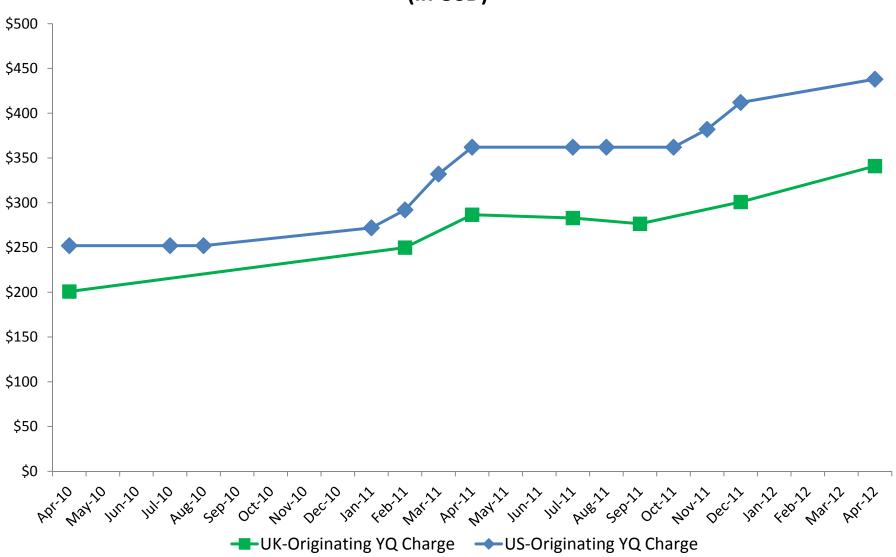
2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

Based on one-way and one-stop round-trip tickets.

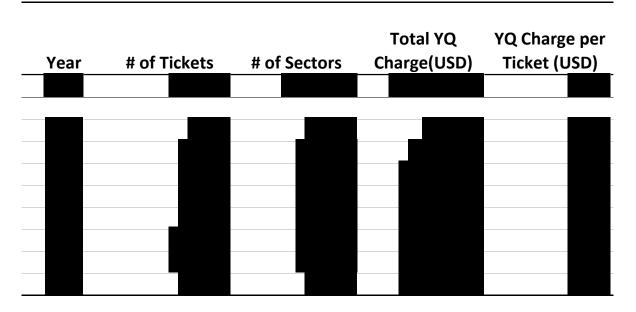
# BA Economy Class YQ Charges on Flights Between LON and JFK (in USD)



Sources: BA00158602; Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: Average monthly exchange rates used for currency conversion.

# **BA YQ Charges to Members of the Proposed Class**



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621).

ICW data received on 04 15 2015 (BA00174625, BA00174626).

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

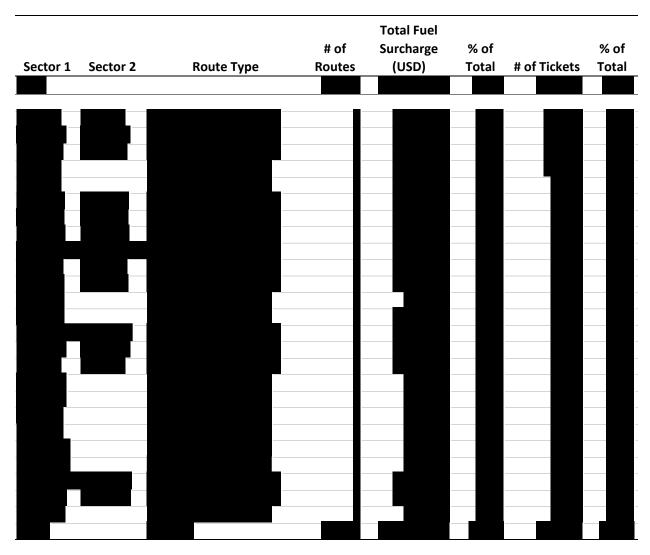
Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings

made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

## **Routes Most Commonly Flown by Class Members**



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626).

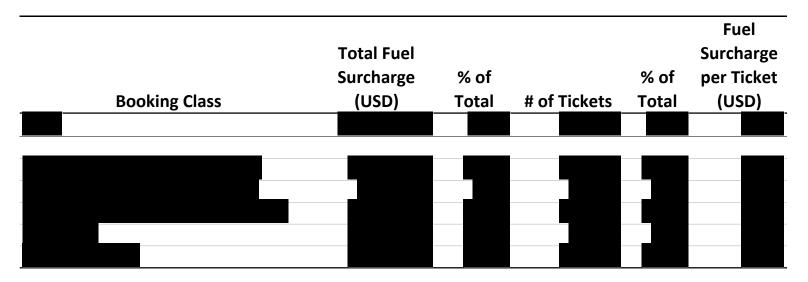
Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

# **Class of Service for Tickets Booked by Class Members**



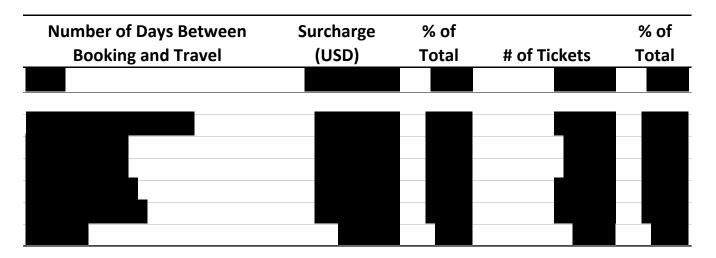
Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626). Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

# Length of Time Before Travel That Class Members Booked Their Tickets



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621).

ICW data received on 04 15 2015 (BA00174625, BA00174626).

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges

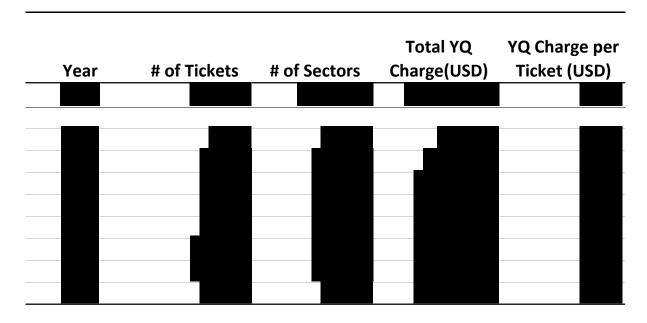
for bookings made prior to January 31, 2012. A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

Other category includes tickets where travel date preceeds booking date or where travel date is more

than 360 days after booking date.

# Aggregate Damages to Class Members: BA YQ Charges by Year



Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621).

ICW data received on 04 15 2015 (BA00174625, BA00174626);

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for

bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

## **Alternative Damages Calculations (USD)**

				Percent wi	th Negative	Damages
Model	Damages	Actual YQ Charges	But-for Fuel Surcharges	Customers	Tickets	Sectors
All YQ Charges are Damages	\$					
Alternative 1: Distance-based FS /						
Recover Incremental Fuel Costs						
Alternative 2: Flat FS / 2.5 GBP per						
0.0013 USD Incremental Fuel						
Costs/RPK (1Q04-2Q04)						
Alternative 3: Flat FS / 2.5 GBP per						
3.50 USD Incremental Brent Price						
(1Q04-2Q04)						
Alterantive 4: Flat FS / 3.5 GBP per						
0.0007 USD Incremental Fuel Costs/RPK (2Q04-3Q04)						
Alternative 5: Flat FS / 3.5 GBP per						
5.96 USD Incremental Brent Price						
(2Q04-3Q04)						

Sources: ICW data received on 04 03 2015 (BA00174616-BA00174621);

ICW data received on 04 15 2015 (BA00174625, BA00174626); BA and IAG quarterly reports; EIA;

Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ charges for bookings made prior to January 31, 2012.

A customers is defined as a unique customer ID number. A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected YQ charges were excluded.

BA quarterly statements are used before 4Q10, IAG quarterly statements starting 1Q2011.

The BA and IAG data were converted to USD using average quarterly GBP/USD and EUR/USD exchange rates.

Fuel costs, ASK, and RPK were imputed in quarters with cumulative 6, 9, or 12 months results by differencing.

Fuel costs, ASK, RPK were imputed using percentage changes relative to prior periods where exact numbers were not reported.

RPK in 2009Q2 and 2010Q2 were imputed by assuming the same percentage change relative to prior periods as for ASK.

Appendix 4
Incremental BA/IAG Fuel Costs (USD)

Quarter	Fuel Costs (Million USD)	Available Seat Kilometers ASK (Million)	Fuel Costs per ASK (USD)	Incremental Fuel Costs per ASK (USD)	Revenue Passenger Kilometers RPK (Million)	Load Factor RPK/ASK	Incremental Fuel Costs per RPK (USD)
[A]	[B]	[C]	[D]=[B]/[C]	[E]=[D(t)]-[D(t-1)]	[F]	[G]=[F]/[C]	[H]=[E]/[G]
03Q1	330	33,729	0.009788		23,439	0.69	_
03Q2	371	34,962	0.010603	0.000815	25,102	0.72	0.001135
03Q3	388	35,981	0.010793	0.000190	27,540	0.77	0.000249
03Q4	382	35,098	0.010897	0.000104	25,518	0.73	0.000143
04Q1	419	35,232	0.011881	0.000984	24,932	0.71	0.001390
04Q2	466	36,150	0.012893	0.001012	27,083	0.75	0.001351
04Q3	493	36,639	0.013458	0.000565	28,749	0.78	0.000720
04Q4	616	35,723	0.017243	0.003785	25,999	0.73	0.005200
05Q1	509	35,677	0.014262	-0.002981	26,062	0.73	-0.004080
05Q2	659	36,706	0.017951	0.003689	27,768	0.76	0.004876
05Q3	732	37,452	0.019547	0.001596	29,812	0.80	0.002005
05Q4	740	37,119	0.019929	0.000382	27,499	0.74	0.000516
06Q1	778	36,657	0.021236	0.001308	26,780	0.73	0.001790
06Q2	936	38,222	0.024477	0.003241	29,909	0.78	0.004141
06Q3	1,001	38,727	0.025849	0.001372	30,872	0.80	0.001721
06Q4	876	36,563	0.023957	-0.001892	27,073	0.74	-0.002555
07Q1	889	36,405	0.024428	0.000471	26,003	0.71	0.000659
07Q2	939	38,337	0.024499	0.000071	29,341	0.77	0.000092
07Q3	1,031	37,368	0.027591	0.003092	29,995	0.80	0.003852
07Q4	1,081	38,715	0.027917	0.000326	28,767	0.74	0.000439
08Q1	1,074	35,152	0.030558	0.002641	24,913	0.71	0.003727
08Q2	1,392	38,605	0.036070	0.005512	28,336	0.73	0.007510
08Q3	1,492	38,121	0.039130	0.003059	28,901	0.76	0.004035
08Q4	1,177	37,923	0.031034	-0.008096	32,648	0.86	-0.009404
09Q1	1,042	33,855	0.030771	-0.000263	24,461	0.72	-0.000364
09Q2	924	37,408	0.024707	-0.006064	27,458	0.73	-0.008262
09Q3	1,037	37,004	0.028033	0.003326	32,540	0.88	0.003783
09Q4	955	35,766	0.026710	-0.001323	27,263	0.76	-0.001735
10Q1	872	31,000	0.028114	0.001404	23,590	0.76	0.001845
10Q2	883	33,219	0.026571	-0.001543	24,382	0.73	-0.002103
10Q3	1,032		0.028219	0.001648	30,869	0.84	0.001953
10Q4	967	34,623	0.027944	-0.000276	26,720	0.77	-0.000357
11Q1	1,543	51,118	0.030185	0.002242	37,768	0.74	0.003034
11Q2	1,887	53,424	0.035324	0.005139	42,635	0.80	0.006439
11Q3	1,855	55,662	0.033326	-0.001997	47,022	0.84	-0.002364
11Q4	1,775	52,989	0.033503	0.000176	41,192	0.78	0.000227
12Q1	1,847	51,425	0.035921	0.002418	39,140	0.76	0.003177
12Q2	2,007	55,851	0.035941	0.000020	45,421	0.81	0.000025
12Q3	2,078	58,260	0.035671	-0.000270	49,343	0.85	-0.000319
12Q4	1,905	53,636	0.035512	-0.000159	42,198	0.79	-0.000203
13Q1	1,797	50,359	0.035676	0.000165	38,975	0.77	0.000213

## Appendix 4

## Incremental BA/IAG Fuel Costs (USD)

Quarter	Fuel Costs (Million USD)	Available Seat Kilometers ASK (Million)	Fuel Costs per ASK (USD)	Incremental Fuel Costs per ASK (USD)	Revenue Passenger Kilometers RPK (Million)	Load Factor RPK/ASK	Incremental Fuel Costs per RPK (USD)
13Q2	1,963	58,186	0.033735	-0.001941	47,230	0.81	-0.002392
13Q3	2,134	63,689	0.033514	-0.000221	54,015	0.85	-0.000261
13Q4	2,009	58,339	0.034444	0.000930	46,084	0.79	0.001177
14Q1	1,902	56,316	0.033776	-0.000668	43,220	0.77	-0.000870
14Q2	2,071	64,576	0.032067	-0.001709	52,111	0.81	-0.002118
14Q3	2,146	69,342	0.030942	-0.001125	58,206	0.84	-0.001340
14Q4	1,835	61,697	0.029741	-0.001200	49,025	0.79	-0.001510

Sources: BA and IAG quarterly reports; Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: BA quarterly statements are used before 4Q10, IAG quarterly statements starting 1Q2011.

The BA data were converted to USD using average quarterly exchange rates. The IAG data were converted to USD using average quarterly exchange rates.

Fuel costs, ASK, and RPK were imputed in quarters with cumulative 6, 9, or 12 months results by differencing.

### Appendix 5

## Alternative 1: A Fuel Surcharge Based Quarterly Changes in Fuel Costs.

Quarter	Total YQ Charges (USD)	But-For Fuel Surcharge (USD)	# of Tickets	# of Sectors	Damages (USD)	Number of Tickets with Negative Damages	Number of Sectors with Negative Damages
annonner on the second of the							
annonnen on a							

Source: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626);

 $BA \ and \ IAG \ quarterly \ reports; \ Federal \ Reserve \ For eign \ Exchange \ Rates - H.10 \ Release \ as \ of \ March \ 9, \ 2015.$ 

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected fuel surcharges were excluded.

BA quarterly statements are used before 4Q10, IAG quarterly statements starting 1Q2011.

The BA data were converted to USD using average quarterly exchange rates.

The IAG data were converted to USD using average quarterly exchange rates.

But-for fuel surcharges are obtained by multiplying positive incremental fuel costs per RPK for the quarter of travel by route distance.

#### Appendix 6

Alternative 2: A Fuel Surcharge Based on the Incremental Fuel Cost Prior to BA's Imposition of the £2.50 YQ Charge in May 2004.

Quarter	Total YQ Charges (USD)	But-For Fuel Surcharge (USD)	# of Tickets	# of Sectors	Damages (USD)	Number of Tickets with Negative Damages	Number of Sectors with Negative Damages
	narroarinniarnnarroarinniar				- parameter and a second a second and a second a second and a second a second and a		
	and the continues the continue				contraction throat thro		
						***************************************	
	and the continues of th				a conferenda con describir conferenda con de conferencia.		
A0000000000000000000000000000000000000							

Source: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626);

BA and IAG quarterly reports; Federal Reserve Foreign Exchange Rates - H.10 Release as of March 9, 2015.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

 $\label{prime:constraints} \mbox{Prime tickets with zero collected fuel surcharges were excluded.}$ 

BA quarterly statements are used before 4Q10, IAG quarterly statements starting 1Q2011.

The BA data were converted to USD using average quarterly exchange rates.

The IAG data were converted to USD using average quarterly exchange rates.

But-for fuel surcharges are based on 2.5 GBP per 0.0013 USD Incremental Fuel Costs/RPK (1Q04-2Q04).

Appendix 7

## **Brent Crude Prices**

		Change in Pront Crude
Quarter	Brent Crude (USD)	Change in Brent Crude (USD)
03Q1	31.44	· ·
03Q2	26.18	-5.26
03Q3	28.47	2.29
03Q4	29.47	1.00
04Q1	31.91	2.43
04Q2	35.40	3.50
04Q3	41.36	5.96
04Q4	44.12	2.76
05Q1	47.71	3.60
05Q2	51.61	3.90
05Q3	61.53	9.92
05Q4	56.91	-4.62
06Q1	61.74	4.83
06Q2	69.42	7.69
06Q3	69.91	0.48
06Q4	59.67	-10.24
07Q1	57.73	-1.94
07Q2	68.69	10.96
07Q3	74.87	6.18
07Q4	88.62	13.75
08Q1	96.85	8.22
08Q2	121.69	24.84
08Q3	115.33	-6.36
08Q4	54.47	-60.85
09Q1	44.40	-10.07
09Q2	58.90	14.50
09Q3	68.15	9.25
09Q4	74.39	6.24
10Q1	76.28	1.89
10Q2	78.41	2.13
10Q3	76.58	-1.82
10Q4	86.44	9.85
11Q1	104.90	18.47

Appendix 7

## **Brent Crude Prices**

Oversten	Durant County (UCD)	Change in Brent Crude
Quarter	Brent Crude (USD)	(USD)
11Q2	117.32	12.42
11Q3	113.25	-4.08
11Q4	109.31	-3.94
12Q1	118.39	9.08
12Q2	108.59	-9.79
12Q3	109.62	1.02
12Q4	110.03	0.41
13Q1	112.33	2.30
13Q2	102.46	-9.87
13Q3	110.43	7.97
13Q4	109.27	-1.16
14Q1	108.18	-1.09
14Q2	109.80	1.61
14Q3	101.96	-7.83
14Q4	76.25	-25.71

Sources: EIA.

### Appendix 8

Alternative 3: A Fuel Surcharge Based on the Incremental Fuel Prices Prior to BA's Imposition of the £2.50 YQ Charge in May 2004.

Quarter	Total YQ Charges (USD)	But-For Fuel Surcharge (USD)	# of Tickets	# of Sectors	Damages (USD)	Number of Tickets with Negative Damages	Number of Sectors with Negative Damages
						Ī	
ALACA MARIAN BANKA							
Marco de condecendo con esta c							

Source: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626);

EIA.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

 $\label{prime:constraints} \mbox{Prime tickets with zero collected fuel surcharges were excluded.}$ 

But-for fuel surcharges are based on 2.5 GBP per 3.50 USD Incremental Brent Price (1Q04-2Q04) .

#### Appendix 9

Alternative 4: A Fuel Surcharge Based on the Incremental Fuel Costs When BA Collusively Increased Its YQ Charge from £2.50 in May 2004 to £6.00 in August 2004.

Quarter	Total YQ Charges (USD)	But-For Fuel Surcharge (USD)				Number of Tickets with	Number of
			# of Tickets	# of Sectors	Damages (USD)	Negative Damages	Sectors with Negative Damages

Source: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626);

BA and IAG quarterly reports.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

 $\label{prime:constraints} \mbox{Prime tickets with zero collected fuel surcharges were excluded.}$ 

BA quarterly statements are used before 4Q10, IAG quarterly statements starting 1Q2011.

The BA data were converted to USD using average quarterly exchange rates.

The IAG data were converted to USD using average quarterly exchange rates.

But-for fuel surcharges are based on 3.5 GBP per 0.0007 USD Incremental Fuel Costs/RPK (2Q04-3Q04).

### Appendix 10

Alternative 5: A Fuel Surcharge Based on the Incremental Fuel Prices When BA Collusively Increased Its YQ Charge from £2.50 in May 2004 to £6.00 in August 2004.

		Including Sectors with Zero Actual Fuel Surcharges						
Quarter	Total YQ Charges (USD)	But-For Fuel Surcharge (USD)	# of Tickets	# of Sectors	Damages (USD)	Number of Tickets with Negative Damages	Number of Sectors with Negative Damages	
***************************************								
A0000000000000000000000000000000000000					eronero Anniko orano Anniko orano orang			
characteristic and travelles								
ALOUGO DE COMPANION DE COMPANIO								

Source: ICW data received on 04 03 2015 (BA00174616-BA00174621); ICW data received on 04 15 2015 (BA00174625, BA00174626);

EIA.

Notes: 2.5 GBP security and insurance surcharges were subtracted from YQ surcharges for bookings made prior to January 31, 2012.

A ticket is defined as a unique prime ticket number.

Prime tickets with zero collected fuel surcharges were excluded.

But-for fuel surcharges are based on 3.5 GBP per 5.96 USD Incremental Brent Price (2Q04-3Q04)